E9490UD_EN.qx3 04.8.3 11:54 AM Page 1

OWNER'S MANUAL

MAGNAVOX
SMART. VERY SMART.

MRV700VR

DIGITAL VIDEO DISC RECORDER & VIDEO CASSETTE RECORDER

THANK YOU FOR CHOOSING MAGNAVOX.

NEED HELP FAST?

READ YOUR QUICK-USE GUIDE AND/OR OWNER'S MANUAL FIRST FOR QUICK TIPS THAT MAKE USING YOUR MAGNAVOX PRODUCT MORE ENJOYABLE. IF YOU HAVE READ YOUR INSTRUCTIONS AND STILL NEED ASSISTANCE, YOU MAY ACCESS OUR ONLINE HELP AT ***WWW.MAGNAVOX.COM*** *OR CALL* ***1-800-705-2000*** *WHILE WITH YOUR PRODUCT.*

VCR Plus+®

E9490UD_EN.qx3 04.8.3 11:54 AM Page 2

Return your Product Registration Card today to get the very most from your purchase.

Registering your model with MAGNAVOX makes you eligible for all of the valuable benefits listed below, so don't miss out. Complete and return your Product Registration Card at once to ensure:

*Proof of Purchase

Returning the enclosed card guarantees that your date of purchase will be on file, so no additional paperwork will be required from you to obtain warranty service.

*Product Safety Notification

By registering your product, you'll receive notification - directly from the manufacturer - in the rare case of a product recall or safety defect.

*Additional Benefits of Product Ownership

Registering your product guarantees that you'll receive all of the privileges to which you're entitled, including special money-saving offers.

MAGNAVOX

Congratulations on your purchase, and welcome to the "family!"

Dear MAGNAVOX product owner:

Thank you for your confidence in MAGNAVOX. You've selected one of the best-built, best-backed products available today. We'll do everything in our power to keep you happy with your purchase for many years to come.

As a member of the MAGNAVOX "family," you're entitled to protection by one of the most comprehensive warranties and outstanding service networks in the industry. What's more, your purchase guarantees you'll receive all the information and special offers for which you qualify, plus easy access to accessories from our convenient home shopping network.

Most importantly, you can count on our uncompromising commitment to your total satisfaction.

All of this is our way of saying welcome - and thanks for investing in a MAGNAVOX product.

P.S. To get the most from your MAGNAVOX purchase, be sure to complete and return your Product Registration Card at once.

Know these

safety *symbols*

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This "bolt of lightning" indicates uninsulated material within your unit may cause an electrical shock. For the safety of everyone in your household, please do not remove product covering.

The "exclamation point" calls attention to features for which you should read the enclosed literature closely to prevent operating and maintenance problems.

WARNING: To reduce the risk of fire or electric shock, this apparatus should not be exposed to rain or moisture, and objects filled with liquids, such as vases, should not be placed on this apparatus.

CAUTION: To prevent electric shock, match wide blade of plug to wide slot, fully insert.

ATTENTION: Pour éviter les choc électriques, introduire la lame la plus large de la fiche dans la borne correspondante de la prise et pousser jusqu'au fond.

For Customer Use

Enter below the Serial No. which is located on the rear of the cabinet. Retain this information for future reference.

Model No. _____

Serial No. _____

E9490UD_EN.qx3 04.8.3 11:54 AM Page 3

Safety Precautions

Warning: To prevent fire or shock hazard, do not expose this equipment to rain or moisture.
Federal Communications Commission (FCC) Warning: Any unauthorized changes or modifications to this equipment void the user's authority to operate it.

Laser Safety

This unit employs a laser. Only a qualified service person should remove the cover or attempt to service this device, due to possible eye injury.
CAUTION: Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure. The set complies with the FCC-Rules, Part 15 and with 21 CFR 1040.10.
CAUTION: Visible and invisible laser radiation when open and interlock defeated. Do not stare into the beam. The beam is located inside, near the deck mechanism.

Special Information for Canadian Users

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the Radio Interference Regulations of the Canadian Department of Communications.
CET APPAREIL NUMÉRIQUE N'ÉMET PAS DE BRUITS RADIOÉLECTRIQUES DÉPASSANT LES LIMITES APPLICABLES DANS LA RÈGLEMENT SUR LE BROUILLAGE RADIOÉLECTRIQUES ÉDICTÉ PAR LE MINISTÈRE DES COMMUNICATIONS DU CANADA.

Radio/TV Interference

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, try to correct the interference by one or more of the following measures:

1) Reorient or relocate the receiving antenna.
2) Increase the separation between the equipment and the receiver.
3) Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4) Consult the dealer or an experienced radio/TV technician for help.

WARNING:

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

1) This device may not cause harmful interference.
2) This device must accept any interference received, including interference that may cause undesired operation.

IMPORTANT:

This product was FCC verified under test conditions that included use of shielded cables and connectors between system components. Use shielded cables to reduce the possibility of causing interference to radios, televisions, and other electronic devices. If you have any problems, contact Magnavox.

Copyright Protection

Unauthorized copying, broadcasting, public performance, and lending of Discs are prohibited. This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

Notice for Progressive Scan Use: Consumers should note that not all high definition television sets are fully compatible with this product and may cause artifacts to be displayed in the picture. In case of 525 progressive scan picture problems, it is recommended that the user switch the connection to the 'standard definition' output. If there are questions regarding your TV set compatibility with this model 525p DVD player, please contact our customer service center.

Note to Cable TV Installer

This reminder is provided to call the Cable TV system installer's attention to Section 820-40 of the National Electrical Code (NEC), which provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Declaration of Conformity

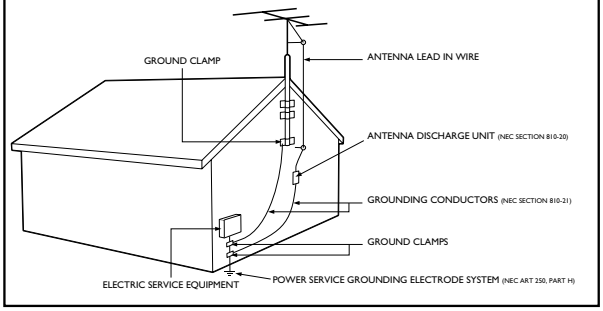
Model Number: MRV700VR
Trade Name: Magnavox
Responsible Party: Philips Consumer Electronics
P.O. Box 14810, Knoxville, TN 37914-1810
(865) 521-4316

4 Safety Information (cont'd)

IMPORTANT SAFETY INSTRUCTIONS

1. Read instructions. Read all the safety and operating instructions before operating the product.
2. Retain instructions. Keep the safety and operating instructions for future reference.
3. Heed warnings. Adhere to all warnings on the product and in the operating instructions.
4. Follow instructions. Follow all operating and use instructions.
5. Cleaning – Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
6. Attachments – Do not use attachments not recommended by the product manufacturer as they may cause hazards.
7. Water and Moisture – Do not use this product near water - for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, near a swimming pool, etc.
8. Accessories – Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer or sold with the product. Any mounting of the product should follow the manufacturer's instructions and should use a mounting accessory recommended by the manufacturer.
9. Move a product and cart combination with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.
10. Ventilation – Slots and openings in the cabinet provide ventilation, ensure reliable operation of the product, and protect it from overheating. Do not block or cover these openings. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. Do not place this product in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.
11. Power Sources – This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company. For products intended to operate from battery power, or other sources, refer to the operating instructions.
12. Grounding or Polarization – This product may be equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug still fails to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
13. Power-Cord Protection – Route power supply cords so they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.
14. Outdoor Antenna Grounding – If an outside antenna or cable system is connected to the product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See figure at right.
15. Lightning – For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.
16. Power Lines – An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, take extreme care to keep it from touching such power lines or circuits; contact with them might be fatal.
17. Overloading – Do not overload wall outlets, extension cords, or integral convenience receptacles. This can result in a risk of fire or electric shock.
18. Object and Liquid Entry – Never push objects of any kind into this product through openings; they may touch dangerous voltage points or short out parts, resulting in a fire or electric shock. Never spill liquid of any kind on the product.
19. Servicing – Do not attempt to service this product yourself. Opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
20. Damage Requiring Service – Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
    a) When the power supply cord or plug is damaged,
    b) If liquid has spilled or objects have fallen into the product,
    c) If the product has been exposed to rain or water,
    d) If the product does not operate normally by following the operating instructions. Adjust only those controls covered by the operating instructions. An improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation,
    e) If the product has been dropped or damaged in any way,
    f) When the product exhibits a distinct change in performance. This indicates a need for service.
21. Replacement Parts – When replacement parts are required, be sure the service technician uses replacement parts specified by the manufacturer or having the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
22. Safety Check – Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.
23. Wall or Ceiling Mounting – Mount the product to a wall or ceiling only as recommended by the manufacturer.
24. Heat - Situate this product away from heat sources, such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.
25. Battery usage CAUTION - To prevent battery leakage that may result in bodily injury, property damage, or damage to the unit:
    • Install all batteries correctly, with + and - aligned as marked on the unit.
    • Do not mix batteries (old/new, carbon/alkaline, etc.).
    • Remove batteries when the unit is not used for a long time.

Example of Antenna Grounding per National Electrical Code


GROUND CLAMP
ANTENNA LEAD IN WIRE
ANTENNA DISCHARGE UNIT (NEC SECTION 810-20)
GROUNDING CONDUCTORS (NEC SECTION 810-21)
GROUND CLAMPS
ELECTRIC SERVICE EQUIPMENT
POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250, PART H)

E9490UD_EN.qx3 04.8.3 11:54 AM Page 5

General Information
Safety Information 3-4
Contents 5
Introduction 6

Getting Started
Playable Discs 7
General Information 8
Hookups 9-17
Initial Setup 18-19

Basic Play and Recording
Quick Videotape Playback 20
Quick Disc Playback 21
Quick Disc Recording 22

Controls
Remote Control 23-24
Display Panel (VCR) 25
Front Panel 26
Rear Panel 27

Advanced Installation
TV Channel Programming 28
VCR Plus+® Channels 29
Clock Setting 30-31

Disc Menus and Displays
Menu Bars 32
On-screen Symbols, Status Box 33
Index Picture Screen 34
Information Boxes 35

Disc Playback Features
Title/Disc Menus, Chapter/Track Selection 36
Audio Language, Subtitles 37
Zoom, Camera Angle 38
Still Picture/Frame-by-Frame Play, Sound 39
Slow Motion, Searching 40
Time Search, Scan 41
Repeat, Repeat A-B 42

Disc Recording Options
One-Touch Recording 43
Videotape to DVD Duplication 44
Timer Recording (DVD mode only) 45
VCR Plus+® Timer Recording (DVD mode only) 46
Erasing Timer Recordings 47
Error Messages 48
Record One Channel/Watch Another (DVD mode) 49
Title Settings Menu 50
Append Recording, Chapter Markers 51
Record Settings 52

Disc Editing
Editing: Disc Information Screen 53
Editing 54
Finalize Disc 55

Additional Disc Features and Setup Options
Auto Resume, Playback Control 56
Access Control 57-61
DVD Recorder Features Menu 62
Picture Settings 63
Digital Output 64
Analog Output 65
Language Settings 66
Night Mode, Remote Control Used 67

VCR Displays
VCR Status Displays 68

VCR Recording Options
Videotape Recording 69
Record One Channel/Watch Another (VCR) 70
One-Touch Recording (VCR) 71
Rerecording (Tape Duplication) 72
DVD to Videotape Duplication 73

Tape Playback Features
Tape Counter 74
Time Search, Index Search 75
Special Effects Playback (Videotape) 76
Automatic Operation Features 77

Information You May Need
Glossary 78-79
Helpful Hints 80-83
Care and Maintenance 84
Specifications 85
Limited Warranty 86
Information Index 88

6 Introduction

Welcome!

Your Magnavox DVD and Video Cassette Recorder records both DVD+RW/DVD+R and videotapes, but also plays prerecorded videotapes, DVDs and other Disc types. You can record TV programs, edit camcorder recordings, and quickly access your DVD recordings in the Index Picture Screen. You'll soon appreciate the digital picture and sound quality of DVD, DVD+RW, and DVD+R, which will exceed the quality you have had with videotapes.
Read this manual carefully to understand the latest features, then enjoy your new DVD and Video Cassette Recorder.

DVD/VCR Features

- Channel Setup
- DVD to Videotape Duplication
- English, French, and Spanish displays
- Multi-Channel TV Sound
- OTR (One-Touch Recording)
- Videotape to DVD Duplication

VCR Features

- Automatic Head Cleaner
- 19 Micron head
- Searching: Time, Index, Forward, and Reverse
- Slow Motion
- Still Picture
- Tape Counter
- Tracking Adjustment

DVD Features

- External Source to DVD+R/DVD+RW recording
- Fast Forward/Reverse Search
- Index Picture Screen
- NTSC/PAL compatibility
- Paused/Slow/Step-by-Step/Zoomed Play
- Progressive Scan compatibility
- Repeat and Repeat A-B playback
- Time Search
- Timer Recording
- VCR Plus+ Programming

Package Contents

- DVD and Video Cassette Recorder
- Remote control with two AA batteries
- One RF coaxial cable (black with silver tip, with single prong in center of tip)
- One set of Audio (red and white tips) and Video (yellow tips) cables
- This owner's manual, a Quick-Use Guide, and registration materials

Environmental Information

Your system has materials that can be recycled and reused if disassembled by a specialized company. Please observe the local regulations regarding the disposal of packaging materials, exhausted batteries, and old equipment.

Safety Information

- Do not expose the Recorder to excessive moisture, rain, sand, or heat sources.
- Place the Recorder on a firm, flat surface.
- Keep the Recorder away from domestic heating equipment and direct sunlight.
- When placing the Recorder in a cabinet, allow about one inch of space all around the Recorder for ventilation.

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E9490UD_EN.qx3 04.8.3 11:55 AM Page 7

Look for these logos on your Discs to determine whether the Disc will or will not play or record on the Magnavox DVD and Video Cassette Recorder.

Discs for Recording and Playing

DVD+RW (Digital Video Disc + Rewritable): These Discs can be recorded on repeatedly. Recordings can be erased, then you can record again on the same Disc.

DVD+R (Digital Video Disc + Recordable): These Discs can be recorded only once. After you finalize a DVD+R, you cannot record on it or edit it any more.

Discs Unsuitable for Recording or Playing

DVD-RAM

DVD-Audio

Discs for Playing Only

DVD (Digital Video Disc)

DVD-R (DVD-Recordable)
You cannot record on these Discs using the Magnavox Recorder.

DVD-RW (DVD-Rewritable)
You cannot record on these Discs using the Magnavox Recorder. These Discs play only if recorded in video mode and finalized.

Audio CD
(Compact Disc Digital Audio)

Video CD (VCD)
Similar to DVDs, these Discs hold less material. For example, a two-hour movie will fit on one DVD, but may take two VCDs.

Super Video CD (SVCD)

CD-R (CD-Recordable)
Only audio and MP3 contents will play.

CD-RW (CD-Rewritable)
The Disc must be finalized (on your computer or audio recorder) before playing on the Magnavox Recorder. Only audio and MP3 contents will play.

DVD Region Codes and Color Systems

DVDs must meet the requirements for Region Codes and Color Systems before you can use them with the Recorder. DVDs must be labelled for ALL regions or for Region 1 in order to play on this DVD Recorder. You cannot play Discs that are labeled for other regions. These symbols must appear on your DVDs, or you cannot play the DVD in this Recorder. These symbols might also appear on the Disc's case or packaging.
The number inside the globe refers to a region of the world. Region 1 represents the United States, Canada, upper regions of North America, Bermuda, the U.S. Virgin Islands, and small regions near Australia.

Furthermore, recordings are made according to different color systems throughout the world. The most common color systems are NTSC, which is used primarily in the United States and North America, PAL, and SECAM.
This Recorder is compatible with NTSC and PAL. Make sure the Discs you play were recorded in NTSC or PAL. The color system of the DVD may appear on the DVD or its case.
However, when playing a PAL Disc, the Recorder must be connected to a PAL-compatible TV using either the S-VIDEO or COMPONENT VIDEO (Y PB PR) jacks of the Recorder. The Recorder's VIDEO jack does not send a clear PAL signal. If a PAL Disc is copy-protected, the picture may not be correct if you are using the COMPONENT VIDEO (Y PB PR) jacks.

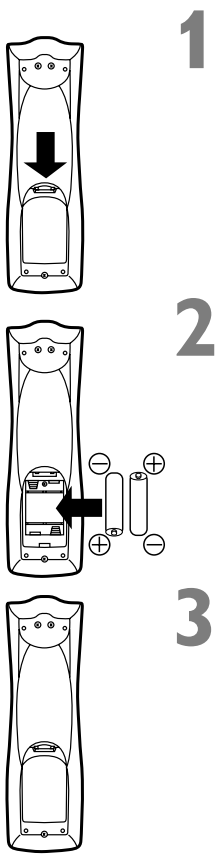
8 General Information

Battery Installation

1 **Remove the battery compartment lid** on the rear of the remote control by pressing in the tab, then lifting off the lid.

2 **Place two AA batteries inside the battery compartment with their + and – ends aligned as indicated.** Do not mix old and new batteries or different types of batteries (standard, alkaline, etc.).

3 **Replace the battery compartment lid.** You will hear it click into place.



Using the Remote Control

Unless stated otherwise, the remote control can operate all the features of the Recorder. Always point the remote control directly at the remote sensor on the front of the Recorder, not the TV. *See page 26.*
Make sure there are no barriers between the remote and the Recorder.

DVD Disc Menus...

Some explanations in this manual describe the DVD Disc Menus, which vary among DVDs. Movie producers set these menus, and not all DVDs have menus. But, if the DVD has a menu, access it by pressing the DISC MENU button on the remote control. *See page 36.*

Recorder Menus...

Some instructions explain how to use the Recorder's System Menu or Menu Bars to set up features of the Recorder or the Disc. You get to the System Menu by pressing SYSTEM MENU on the remote control. *See page 32.* Even if a feature is set up in the Recorder's menu, it will not be available if the current Disc does not include that feature.

Upgrades

If a prerecorded (store purchased) DVD does not play properly, please contact Magnavox for assistance. Due to the inconsistency of Disc formats provided by various Disc manufacturers, your Recorder may require a free playability enhancement or upgrade. As DVD technology has advanced, these enhancements have become both common and easy to complete.

Available Disc Features...

Features in this manual may not be available on every Disc. If the feature is not available, you cannot use the Recorder to make it available. An "X" will appear in the top left corner of the TV screen if you try to access a feature that is not available on the current Disc. Or, try stopping or starting play, then try the feature again. (Some features are only available during play, while others are accessible only when play is stopped.)

E9490UD_EN.qx3 04.8.3 11:55 AM Page 9

Determining the best possible connection...

Your existing equipment, especially your TV, will determine your connection. These guidelines describe which options provide the best picture and sound quality.

★★★★ Component Video provides the best picture quality. Progressive Scan Component Video has the highest quality, but use it only if the TV has Progressive Scan. *See pages 12 and 63.*

★★★ S-Video provides excellent picture quality. *See page 13.*

★★ Composite Video (a yellow Video jack) provides good picture quality. *See page 14.*

★★ **Your TV may have only an RF-style jack, usually labeled Antenna In or 75 ohm.** This may be the jack to which you have connected your Antenna or Cable TV signal already. You can use an RF coaxial cable for a simple connection. *See page 10.*

★★★★ Digital audio connections provide the clearest sound. Connect the Recorder's COAXIAL DIGITAL AUDIO OUT jack to your Stereo for the best sound quality. *See page 16.*

★★★ For the most common audio connection, connect the Recorder's white/red AUDIO OUT L/R (left/right) jacks to the Audio In jacks of your Stereo or TV. *See pages 12-15.*

Before you begin...

- Refer to the manuals of your TV, Stereo, Cable Box, or other equipment as necessary. Note the jacks and connectors on the other equipment. Determine how to choose different Audio and Video In channels on your other equipment so you can see and hear the Recorder on the TV, Stereo, etc.
- Disconnect all equipment from the power outlets. Connect the equipment to the power outlets only after you have finished hooking up everything. Never make or change connections with equipment connected to the power outlet.

Remember...

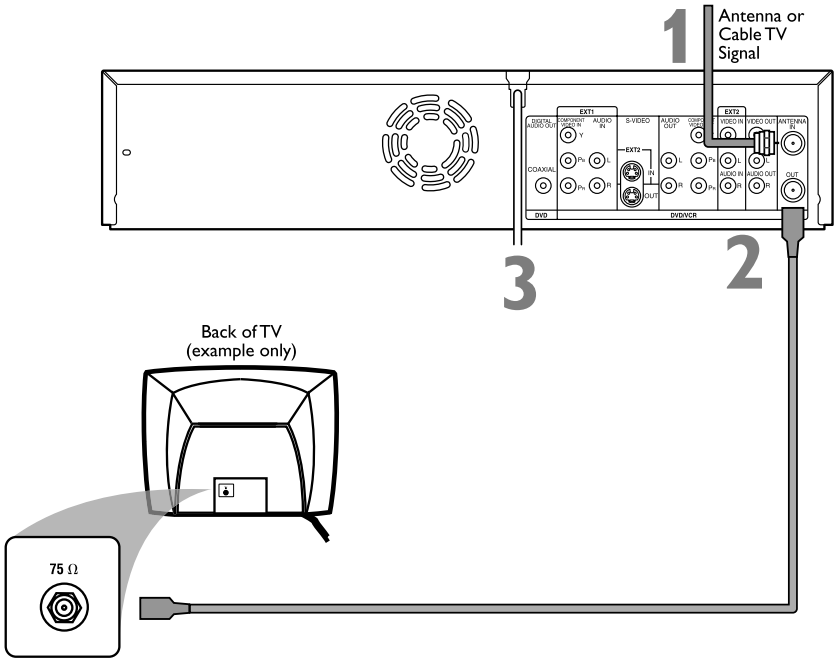
- **Set the TV to the correct Video In channel or channel 3.**
  This is channel 3 only if you connect the Recorder directly to a TV as shown on page 10.
  Otherwise, Video In channels may be called AUX or AUXILIARY IN, AUDIO/VIDEO or A/V IN, EXT1 or EXT2 or External In, etc. These channels often are near TV channel zero (0). Or, your TV remote control may have a button or switch that lets you choose the Video In channel directly. See your TV manual for details. Or, go to your lowest TV channel and change channels down until you see the DVD background picture on the TV screen.
- Connect the Recorder directly to the TV. For example, do not connect the Recorder to another VCR, then connect the VCR to a TV. Your VCR may have the copy protection system, which may distort the picture and sound of a Disc or Videocassette playing on the Recorder.
- Set the Stereo to the correct channel or "source" mode.
- Do not connect the Recorder's AUDIO OUT jacks to the PHONO IN jack of your Stereo.
- You only need one audio connection and one video connection between the Recorder and your TV (or TV and Stereo). You will not use all the jacks on the Recorder.
- **You can use the Recorder to preserve your memories by copying a videotape to a DVD+R or DVD+RW. Special connections may be needed between the Recorder and your camcorder or VCR, which will play the existing videotape into the Recorder for recording. *See pages 17 and 44 for details and options.***
- **To use the DVD or VCR features of this Recorder, you must include a connection with the supplied yellow video cable and red/white audio cables or with the supplied RF coaxial cable. *See pages 10 and 14.***

Once you determine the option that best fits with your existing equipment, find your choice on pages 10-16. Follow the steps for the hookup you chose.
When you finish your connections and turn on the Recorder for the first time, complete the Initial Setup. This sets up TV channels, menu languages, and other features. Go to page 18 to do the Initial Setup.

E9490UD_EN.qx3 04.8.3 11:55 AM Page 10

Connecting to a TV Only
TV has only an Antenna In jack

*This enables use of both VCR and DVD modes.



1 **Connect your Antenna or Cable TV signal to the ANTENNA IN jack on the rear of the Recorder.** Your antenna or Cable TV signal may have been connected to your TV. If so, disconnect it from the TV and connect it to the Recorder's ANTENNA IN jack.

2 **Connect the supplied RF coaxial cable to the (ANTENNA) OUT jack on the rear of the Recorder. Connect the other end of the same RF coaxial cable to the Antenna In jack on your TV.** Your TV's Antenna In jack may be labelled RF In, Antenna In, or 75 ohm. Check your TV's manual for details.

3 **Connect the power cords of the Recorder and the TV to a power outlet.**

4 **Press STANDBY-ON ⏻ to turn on the Recorder.**

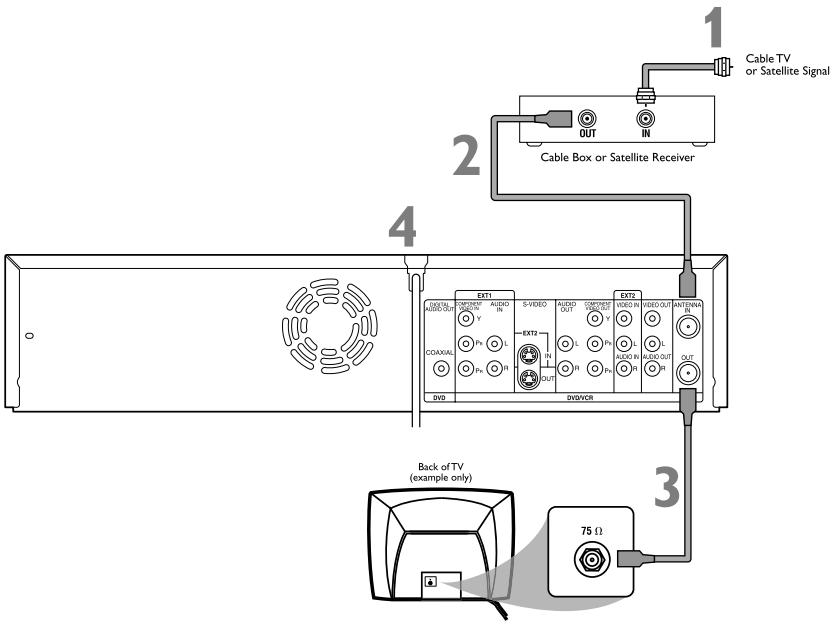
5 **Turn on the TV power. Set it to channel 3.** You should see the DVD background picture or the Initial Setup screen on the TV. *The Initial Setup screen will appear the first time you turn on the Recorder. Go to page 18 to continue.*
If channel 3 is already occupied, you may need to use channel 4 as your Recorder's output channel instead. To change the output channel to channel 4, press STANDBY-ON ⏻ to turn off the Recorder. Press DVD on the remote. Then press and hold the Number 4 button on the remote for several seconds until you see "C04" on the display panel. Now the Recorder's output channel is set to channel 4. Set your TV to channel 4. The Initial Setup screen should appear. (To go back to using channel 3 at the TV, press and hold the Number 3 button on the remote instead.)

Helpful Hint

- *If "IS TV ON? C03" appears on the display panel, you need to turn on your TV and set it to channel 3. This is part of the Initial Setup. You cannot see the Initial Setup screens until you turn on the TV and have it on the correct Video In channel (channel 3 for this connection).*

E9490UD_EN_v1_film.qx3 04.8.4 3:56 PM Page 11

Connecting to a TV and a Cable Box or Satellite Receiver



1 **Connect your Satellite or Cable TV signal to the ANTENNA IN jack on your Cable Box/Satellite Receiver.**

2 **If your Cable Box/Satellite Receiver has a single ANTENNA OUT or TO TV jack: Connect the supplied RF coaxial cable to the ANTENNA OUT/TO TV jack of the Cable Box/Satellite Receiver and to the ANTENNA IN jack on the rear of the Recorder.**
If your Cable Box/Satellite Receiver has AUDIO/VIDEO OUT jacks: Connect them to the Recorder's EXT 2 VIDEO IN and AUDIO IN jacks. These jacks are red and white (AUDIO) and yellow (VIDEO). Use the supplied audio and video cables, which have red/white/yellow markings.

3 **Connect another RF coaxial cable to the Recorder's (ANTENNA) OUT jack and to the ANTENNA IN or RF IN jack on your TV.** Your TV's Antenna In jack may be labelled RF In or 75 ohm. Check your TV manual for details. Or, use an Audio/Video connection between the Recorder and the TV. *See pages 12-15.*

4 **Connect the power cords of the Recorder, Cable Box/Satellite Receiver, and TV to a power outlet.**

5 **Press STANDBY/ON ⏻ to turn on the Recorder. Set the Recorder to channel 3 or 4 (your Cable Box/Satellite Receiver's output channel) if you used an RF coaxial cable to connect the Cable Box/Satellite Receiver to the Recorder.**
Set the Recorder to EXT 2 if you used those jacks on the Recorder to connect to the Cable Box/Satellite Receiver.

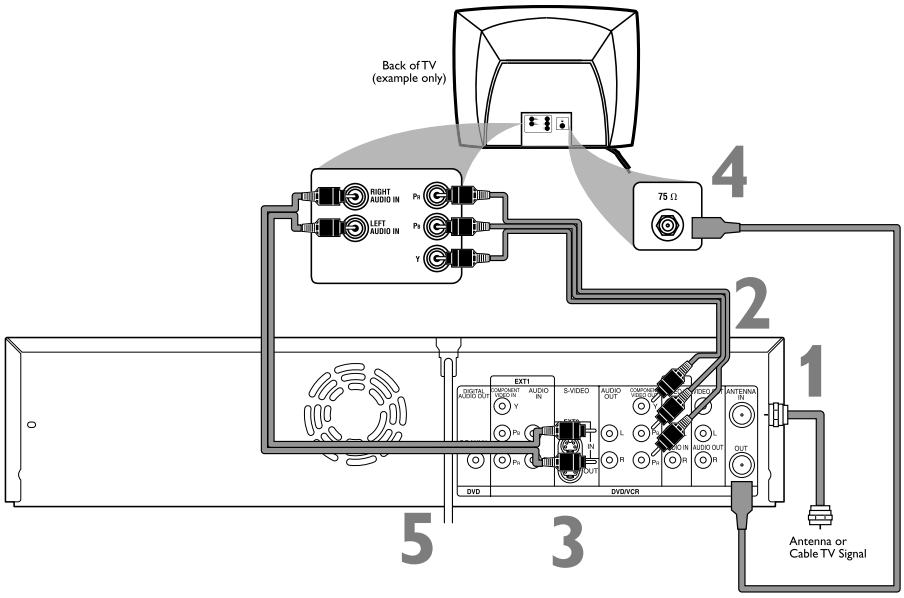
6 **Turn on the TV and the Cable Box/Satellite Receiver.**
Set the TV to channel 3 to receive the picture from the Recorder (if you used the RF coaxial cable as shown for step 3).
You should see the DVD background picture or the Initial Setup screen on the TV. *The Initial Setup screen will appear the first time you turn on the Recorder. Go to page 18 to continue.*

Helpful Hints

- ***To watch TV, put the Recorder in Monitor mode and on channel 3 or 4. (Press MONITOR on the Recorder's remote.) Change TV channels at your Cable Box or Satellite Receiver.***
- *If "IS TV ON? C03" appears on the display panel, you need to turn on your TV and set it to channel 3. You cannot see the Initial Setup screens until you turn on the TV and have it on the correct Video In channel.*
- *If channel 3 is already occupied, you may need to use channel 4 as your Recorder's output channel instead. To change the output channel to channel 4, press STANDBY-ON ⏻ to turn off the Recorder. Press DVD on the remote. Then press and hold the Number 4 button on the remote for several seconds until you see "C04" on the display panel. Now the Recorder's output channel is set to channel 4. Set your TV to channel 4. The Initial Setup screen should appear.*

12 Hookups (cont'd)

Connecting to a TV Only
TV has Component Video In Jacks



1 **Connect your Antenna or Cable TV signal to the ANTENNA IN jack on the rear of the Recorder.**

2 **Connect the Recorder's COMPONENT VIDEO OUT (Y PB PR) jacks to the TV's COMPONENT VIDEO IN jacks.** Use component video cable (not supplied), which has red, blue, and green markings. Match the cable colors to the jack colors.

3 **Connect the Recorder's white/red AUDIO OUT L/R (left/right) jacks to the TV's left/right AUDIO IN jacks.** Use the supplied two-strand audio cable, which has red and white markings. Match cable colors to jack colors.

4 **Connect the supplied RF coaxial cable to the Recorder's (ANTENNA) OUT jack and to the Antenna In jack on your TV.** Your TV's Antenna In jack may be labelled RF In, Antenna In, or 75 ohm. Check your TV's manual for details.

5 **Connect the power cords of the Recorder and the TV to a power outlet.**

6 **Press STANDBY-ON ⏻ to turn on the Recorder.** If "IS TV ON? CO3" appears on the display panel, you need to turn on your TV and set it to the correct **Component Video In channel**. (See next step.) You cannot see the Initial Setup screens until you turn on the TV and have it on the correct Component Video In channel.

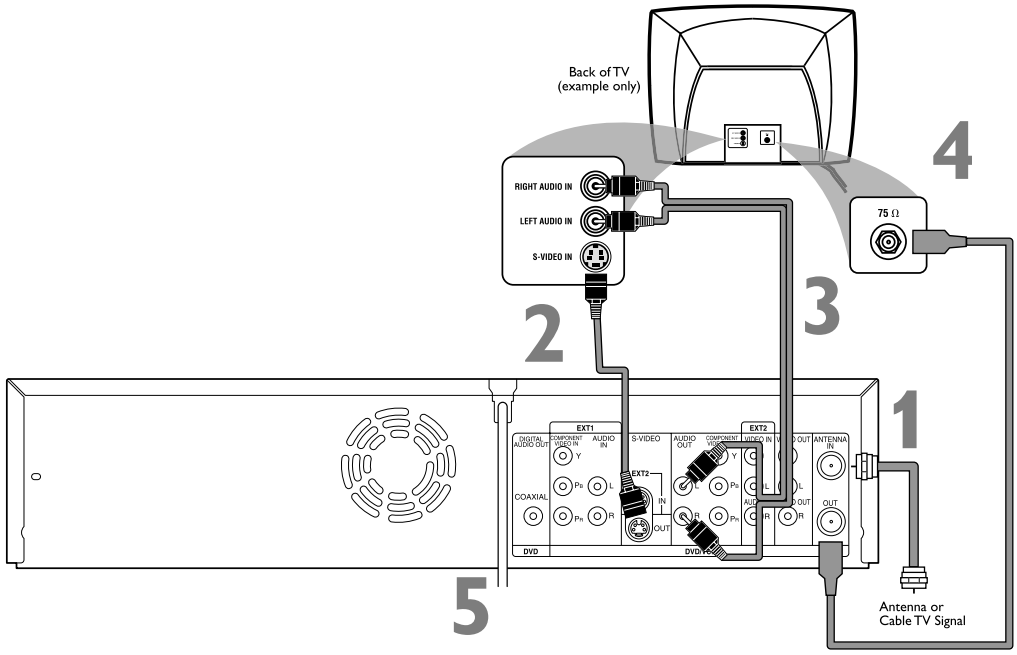
7 **Turn on the TV power. Set the TV to the Component Video In channel.** It is not channel 3 or 4 when you use Component Video. See your TV owner's manual for details. Your TV remote may have a button or switch that selects the Component Video In channel. Or, go to your lowest TV channel and change channels down until you see the DVD background picture or Initial Setup screen on the TV. *The Initial Setup screen will appear the first time you turn on the Recorder. Go to page 18 to continue.*
NOTE: When using the Component Video jacks, make sure Component video output is set to Interlaced. Set Component video output to Progressive Scan only if your TV has Progressive Scan. *See page 63.*

Helpful Hints

- ***If your TV has Progressive Scan,*** *connect the Recorder's COMPONENT VIDEO OUT (Y PB PR) jacks to the TV's Progressive Scan In jacks instead. Progressive Scan produces a clearer picture by doubling the number of visible picture lines per field, providing a jitter-free, sharp, quiet picture. Check your TV manual for details.*
  Set the Recorder's Video output to Progressive Scan. See page 63.
- *On the TV, the Component Video In jacks may be labeled YUV or Pr/Cr Pb/Cb Y and may be green, blue, and red.*

E9490UD_EN.qx3 04.8.3 11:55 AM Page 13

Connecting to a TV Only
TV has an S-Video In Jack



1 **Connect your Antenna or Cable TV signal to the ANTENNA IN jack on the rear of the Recorder.**

2 **Connect an S-Video cable (not supplied) to the Recorder's S-VIDEO OUT jack and to the TV's S-VIDEO In jack.**

3 **Connect the supplied audio cable to the Recorder's white/red AUDIO OUT L/R (left/right) jacks and to the left/right AUDIO IN jacks on the TV.** Match the cable colors to the jack colors.

4 **Connect the supplied RF coaxial cable to the (ANTENNA) OUT jack on the rear of the Recorder. Connect the other end of the same RF coaxial cable to the Antenna In jack on your TV.** Your TV's Antenna In jack may be labelled RF In, Antenna In, or 75 ohm. Check your TV's manual for details.

5 **Connect the power cords of the Recorder and the TV to a power outlet.**

6 **Press STANDBY-ON ⏻ to turn on the Recorder.** If "IS TV ON? C03" appears on the display panel, you need to turn on your TV and set it to the S-Video In channel. (See next step.) You cannot see the Initial Setup screens until you turn on the TV and have it on the correct S-Video In channel.

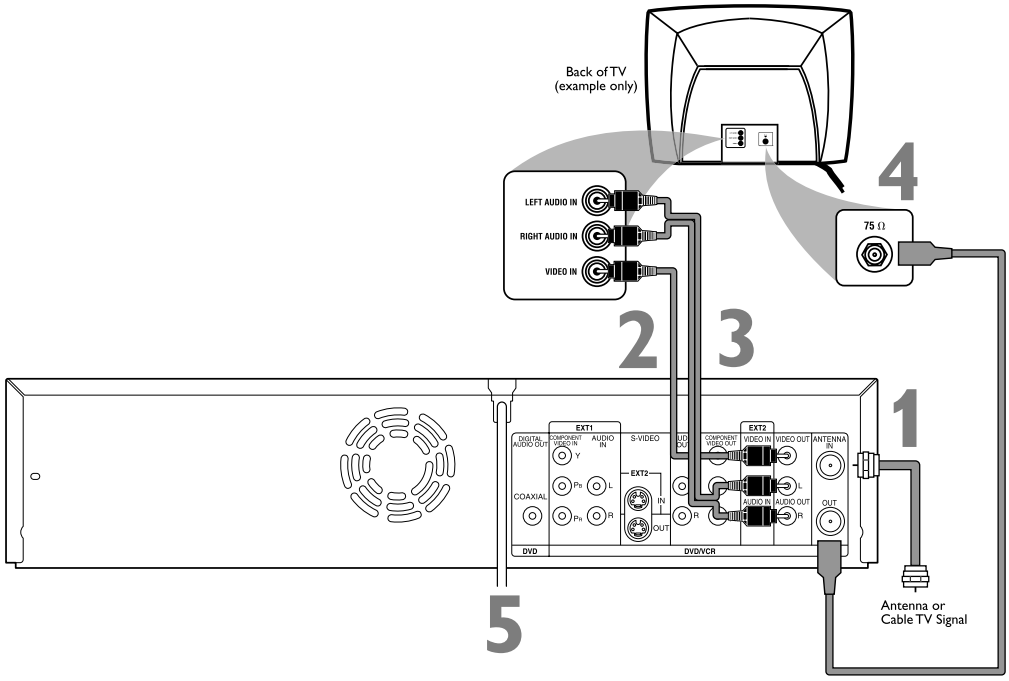
7 **Turn on the TV power. Set the TV to the S-Video In channel.** This is not channel 3 or 4 when you are using S-Video. Your TV remote may have a button or switch that selects the S-Video In channel. Or, go to your lowest TV channel and change channels down until you see the DVD background picture or Initial Setup screen on the TV. *The Initial Setup screen will appear the first time you turn on the Recorder. Go to page 18 to continue.*

Helpful Hint

- *On the TV, the S-Video In jack may be labeled Y/C, S-Video, or S-VHS (super video).*

E9490UD_EN.qx3 04.8.3 11:55 AM Page 14

Connecting to a TV Only
TV has a yellow Video In jack



1 **Connect your Antenna or Cable TV signal to the ANTENNA IN jack on the rear of the Recorder.**

2 **Connect the Recorder's yellow VIDEO OUT jack to your TV's VIDEO IN jack.** Use the supplied video cable that has yellow markings.

3 **Connect the supplied audio cable to the Recorder's white/red AUDIO OUT L/R (left/right) jacks and to the left/right AUDIO IN jacks on your TV.** The supplied audio cable has red and white markings. Match the cable colors to the jack colors.

4 **Connect the supplied RF coaxial cable to the (ANTENNA) OUT jack on the rear of the Recorder. Connect the other end of the same RF coaxial cable to the Antenna In jack on your TV.** Your TV's Antenna In jack may be labelled RF In, Antenna In, or 75 ohm. Check your TV manual for details.

5 **Connect the power cords of the Recorder and the TV to a power outlet.**

6 **Press STANDBY-ON ⏻ to turn on the Recorder.**
If "IS TV ON? CO3" appears on the display panel, you need to turn on your TV and set it to the correct Video In channel. (See next step.) You cannot see the Initial Setup screens until you turn on the TV and have it on the correct Video In channel.

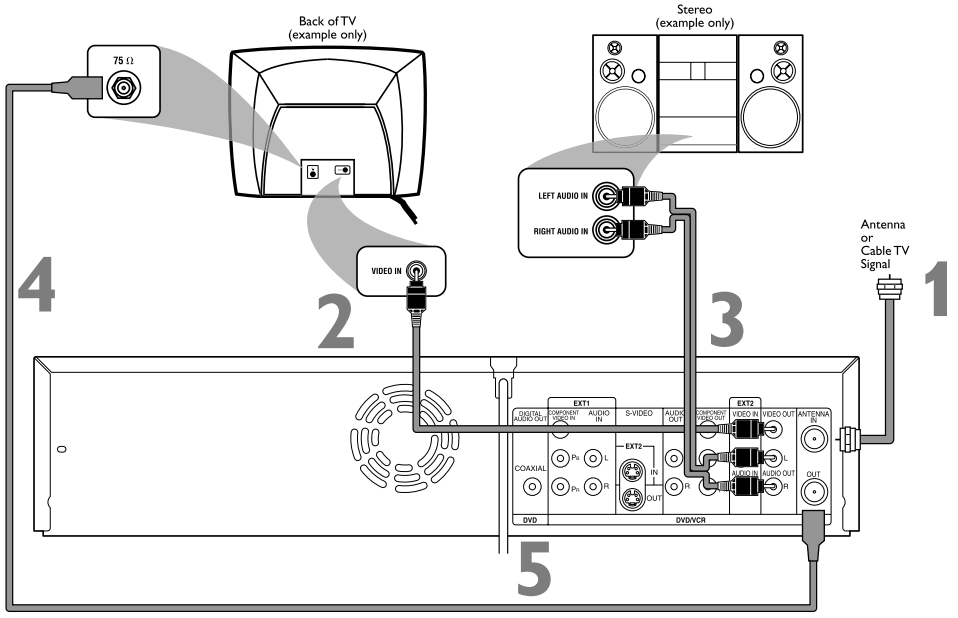
7 **Turn on the TV power. Set the TV to the correct Audio/Video In channel.** Such channels may be called AUX or AUXILIARY IN, AUDIO/VIDEO or A/V IN, EXT1 or EXT2 or External In, etc. This is not channel 3 or 4. See your TV manual. Your TV remote may have a button or switch that selects the Video In channel. Or, go to your lowest TV channel and change channels down until you see the DVD background picture or Initial Setup screen. *The Initial Setup screen will appear the first time you turn on the Recorder. Go to page 18 to continue.*

Helpful Hint

- *The TV's Video In jack is usually yellow. It may be labeled video, CVBS, composite, or baseband.*

E9490UD_EN.qx3 04.8.3 11:55 AM Page 15

Connecting to a TV and a Stereo



1 **Connect your Antenna or Cable TV signal to the ANTENNA IN jack on the rear of the Recorder.**

2 **Connect the Recorder's yellow VIDEO OUT jack to your TV's VIDEO IN jack.** Use the supplied video cable that has yellow markings.

3 **Connect the supplied audio cable to the Recorder's white/red AUDIO OUT L/R (left/right) jacks and to the left/right AUDIO IN jacks on the Stereo.** The audio cable has red and white markings. Match the cable colors to the jack colors.

4 **Connect the supplied RF coaxial cable to the (ANTENNA) OUT jack on the rear of the Recorder. Connect the other end of the same RF coaxial cable to the Antenna In jack on your TV.** Your TV's Antenna In jack may be labelled RF In, Antenna In, or 75 ohm. Check your TV manual for details.

5 **Connect the power cords of the Recorder, Stereo, and TV to a power outlet.**

6 **Turn on the Stereo and set it to the correct Audio In channel or sound source.** Refer to the Stereo owner's manual.

7 **Press STANDBY-ON ⏻ to turn on the Recorder.**
If "IS TV ON? CO3" appears on the display panel, you need to turn on your TV and set it to the correct Video In channel. (See next step.) You cannot see the Initial Setup screens until you turn on the TV and have it on the correct Video In channel.

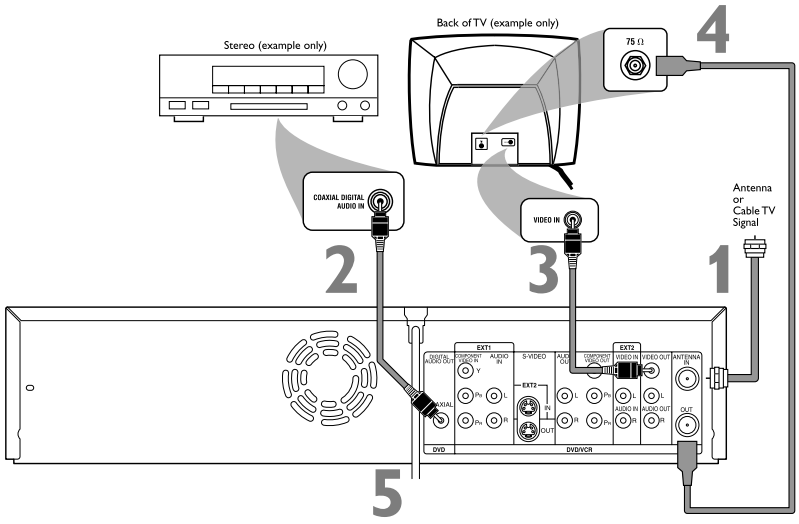
8 **Turn on the TV power. Set the TV to the correct Video In channel.** Such channels may be called AUX or AUXILIARY IN, AUDIO/VIDEO or A/V IN, EXT1 or EXT2 or External In, etc. This is not channel 3 or 4 if you are using the connection shown. See your TV manual. Your TV remote may have a button or switch that selects the Video In channel. Or, go to your lowest TV channel and change channels down until you see the DVD background picture or Initial Setup screen.
The Initial Setup screen will appear the first time you turn on the Recorder. Go to page 18 to continue.

Helpful Hints

- *Set Analog output accordingly. See page 65.*
- *To use Component Video or S-Video instead, see pages 12-13. You only need one video connection. Choose the correct Video In channel at the TV.*

E9490UD_EN.qx3 04.8.3 11:55 AM Page 16

Connecting to a TV and a Digital Stereo (Stereo has Dolby Digital™ or MPEG2)



1 **Connect your Antenna or Cable TV signal to the ANTENNA IN jack on the rear of the Recorder.**

2 **Connect the Recorder's COAXIAL DIGITAL AUDIO OUT jack to your Stereo's COAXIAL DIGITAL AUDIO IN jack.** Use a coaxial digital audio cable (not supplied).

3 **Connect the Recorder's yellow VIDEO OUT jack to your TV's VIDEO IN jack.** Use the supplied video cable that has yellow markings.

4 **Connect the supplied RF coaxial cable to the (ANTENNA) OUT jack on the rear of the Recorder. Connect the other end of the same RF coaxial cable to the Antenna In jack on your TV.** Your TV's Antenna In jack may be labelled RF In, Antenna In, or 75 ohm. Check your TV manual for details.

5 **Connect the power cords of the Recorder, Stereo, and TV to a power outlet.**

6 **Turn on the Stereo power and set your Stereo to the correct Digital Audio In channel or sound source.** Refer to the Stereo owner's manual.

7 **Press STANDBY-ON ⏻ to turn on the Recorder.**
If "IS TV ON? CO3" appears on the display panel, you need to turn on your TV and set it to the correct Video In channel. (See next step.) You cannot see the Initial Setup screens until you turn on the TV and have it on the correct Video In channel.

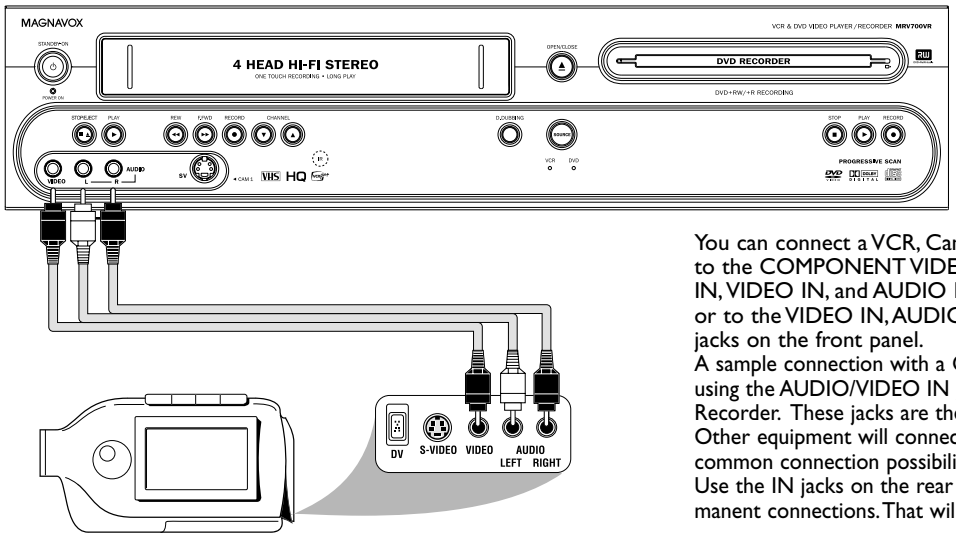
8 **Turn on the TV power. Set the TV to the correct Video In channel.**
This is not channel 3 or 4 if you are using the connection shown. See your TV manual. Your TV remote may have a button or switch that selects the Video In channel. Or, go to your lowest TV channel and change channels down until you see the DVD background picture or Initial Setup screen on the TV. *The Initial Setup screen will appear the first time you turn on the Recorder. Go to page 18 to continue.*

Helpful Hints

- *Digital audio is only available for the Discs you play. You still must make a stereo audio connection (red/white cables) or the RF coaxial connection to have sound at the VCR.*
- *Set Digital output accordingly. See page 64. If the Digital output setting does not match your Stereo's capabilities, the Stereo may produce a strong, distorted sound or no sound at all.*
- *Your Stereo must support Dolby Digital™ or MPEG2. Check the Stereo's manual.*
- *To use Component Video or S-Video instead, see pages 12-13. You only need one video connection. Choose the correct Video In channel at the TV.*

E9490UD_EN.qx3 04.8.3 11:55 AM Page 17

Connecting to Other Equipment for Dubbing



You can connect a VCR, Camcorder, or DVD Player to the COMPONENT VIDEO IN (Y PB PR), S-VIDEO IN, VIDEO IN, and AUDIO IN jacks on the rear panel or to the VIDEO IN, AUDIO IN, or SV (S-Video) IN jacks on the front panel.
A sample connection with a Camcorder is shown here, using the AUDIO/VIDEO IN jacks on the front of the Recorder. These jacks are the most easily accessible. Other equipment will connect similarly, but this is a common connection possibility.
Use the IN jacks on the rear of the Recorder for permanent connections. That will hide the cables from view.

1 **Connect the Recorder directly to your TV.**
Choose a connection from pages 10-16.

2 **To access the AUDIO/VIDEO IN jacks on the front of the Recorder, flip down the door that covers the jacks.**

3 **Connect a video cable to the VIDEO OUT jack of your Camcorder and to the yellow VIDEO IN jack on the front of the Recorder.** Use an RCA-style video cable, which is usually marked with yellow. (One video cable is supplied with the Recorder.)

4 **Connect audio cables to the AUDIO OUT jacks of your Camcorder and to the red and white AUDIO IN jacks on the front of the Recorder.** One set of audio cables is supplied with the Recorder. Most audio cables are red and white. Match the cable colors to the jack colors.

5 **When all connections are complete, connect all the equipment to power. Turn on all the equipment.** Press STANDBY-ON ⏻ on the front of the Recorder to turn it on.

6 **Set your TV to the correct Video In channel.** This will be channel 3 or 4 or a specific Video In channel, depending on your connection between the Recorder and the TV. *Refer to the connection details on pages 10-16.* Or, simply go to channel 5 on your TV, then change channels down until you see the Recorder's logo on the TV screen. *The Initial Setup screen will appear the first time you turn on the Recorder. Go to page 18 to continue.*

7 To watch or record the material playing on the other equipment, **press MONITOR to put the Recorder in Monitor mode. Press ▲ or ▼ to select CAM1 at the Recorder.** This is located after your highest TV channel and before your lowest TV channel. Choose CAM1 if you used the connection shown on this page (with the jacks on the front of the Recorder). If you use the EXT 1 or EXT 2 jacks on the rear of the Recorder instead, choose channel EXT 1 or EXT 2. Choose the channel that matches the jacks to which you connected the other equipment.
Start playing the material by pressing PLAY on the other equipment. Press RECORD ● on the front of the Recorder to start recording on a DVD+R/DVD+RW or a videotape. *(See page 44 for DVD+R or DVD+RW recording.)*

Helpful Hints

- *Most prerecorded videotapes and DVDs are copy protected. If you try to copy them, the Recorder display may show "COPY PROTECT."*
- *If the Recorder's display shows "NO SIGNAL," adjust the tracking or play the videotape on the VCR/Camcorder/External VCR. See your VCR/Camcorder manual to improve the quality of tape play.*
- *Do not connect a Progressive Scan video source (such as a DVD Player) to the EXT 1 COMPONENT VIDEO IN jacks. The Recorder cannot receive Progressive Scan video.*

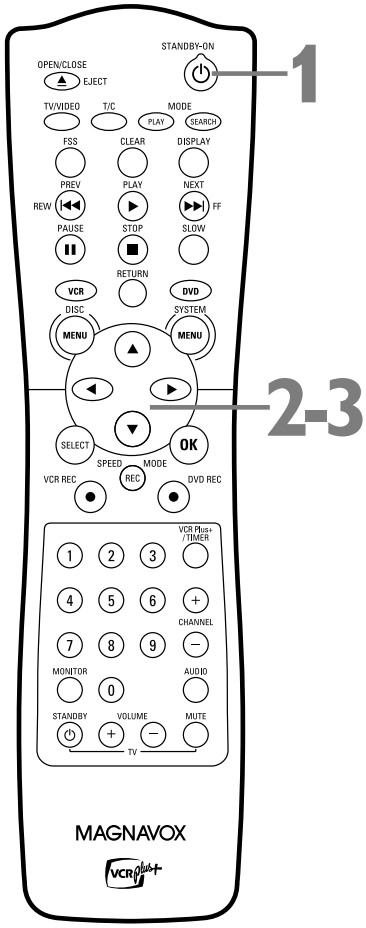
E9490UD_EN.qx3 04.8.3 11:55 AM Page 18

18 Initial Setup

Initial Setup screens will appear the very first time you turn on the Recorder. These on-screen messages and menus will help you set up Recorder features quickly, including TV channels and language options.
During Initial Setup, "IS TV ON? CO3" will appear on the Recorder's display panel. The Initial Setup information shows on your TV.
"IS TV ON? CO3" indicates you should turn on your television and set it to channel 3 or the correct Video In channel. Even though your TV may be on, you must set it to the correct Video In channel to see the Initial Setup messages. ***See pages 9-16 to determine the correct Video In channel for your connection.*** **Or, check your TV owner's manual for details.**

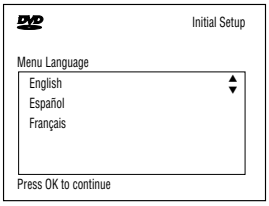
Follow the steps below to set up the Recorder. **You cannot turn off the Recorder until you finish the Initial Setup. The only way to quit the Initial Setup is to disconnect the power cord. If you quit, the Initial Setup screens will appear again the next time you turn on the Recorder. The screens will not go away until you finish the Initial Setup. Also, you cannot open the Disc tray while "IS TV ON? CO3" appears.** ("INSTALL RECORDER FIRST" will show on the display panel.)

If the setup screens do not appear, your Recorder has been set up previously. You can change setup items later. See the pages listed at each step below for each feature.

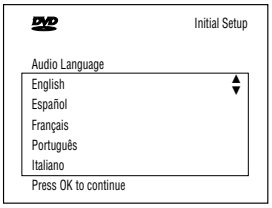


1 **Press STANDBY-ON ⏻ to turn on the Recorder.**

2 The Menu Language screen will appear first. **Press ▲ or ▼ to choose English, Espanol, or Francais, then press the OK button.**
The Recorder's menus, displays, and messages will be in the language you selected.
To change the Recorder's Menu Language later, see page 66.



3 The Audio Language menu appears next. **Press ▲ or ▼ to choose the language you prefer, then press OK**.
The Recorder will play Discs in this language if it is on the Disc. The DVD Disc menu will appear in the same language if available. Some Discs require you to choose the audio language or the Disc Menu language from the Disc menu. The Disc preferences or defaults may override your selection in the Recorder's Audio Language menu.
To change the Audio Language later (as Playback Audio), see pages 37 and 66.



Instructions continue on the next page.

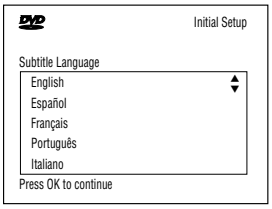
Helpful Hint

- *The Recorder's features will scroll across the display panel when you first connect the power cord. This is a demonstration that cannot be cancelled. It will not appear anymore after you set up the Recorder.*

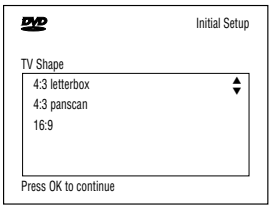
E9490UD_EN.qx3 04.8.3 11:55 AM Page 19

Continued from previous page

4 The Subtitle Language menu appears next. **Press ▲ or ▼ to choose the language you prefer for subtitles, then press OK.** The Recorder will show subtitles in this language if they are available. If the language is not available, either there will be no subtitles or subtitles will be in the default language of the Disc.
Some DVDs require you to choose a subtitle language from the Disc menu. Disc preferences or defaults may override your selection in the Recorder's Subtitle Language menu.
To change the Subtitle Language later, see pages 37 and 66.

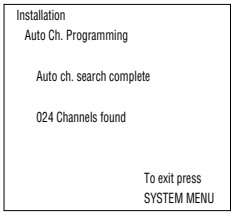


5 The TV Shape menu appears next. **Press ▲ or ▼ to choose the preferred TV Shape, then press OK.**
To change the TV Shape later or for details on TV Shapes, see page 63.

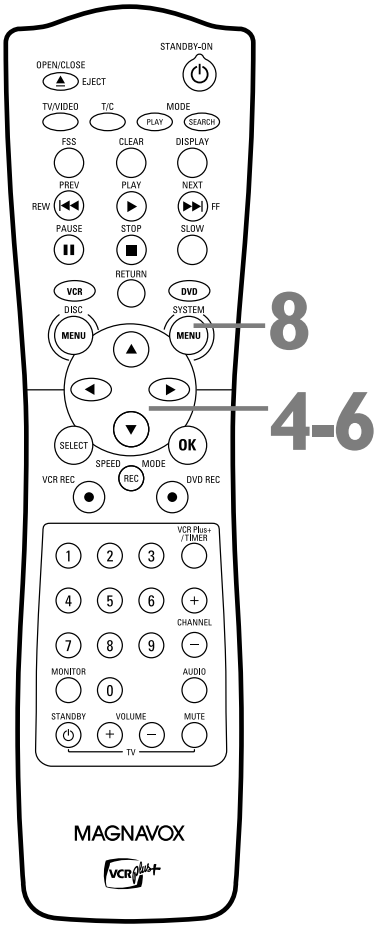


6 "If you have connected the antenna - press OK" appears next. **If you have connected an Antenna or Cable TV signal to the Recorder's ANTENNA IN jack, press OK.**
If you have not connected the Antenna or Cable TV signal, take a moment now to do so. After the Antenna/Cable TV signal is connected, press OK. *See pages 10-16.*
To reset TV channels later, or to add/delete new channel choices later, see page 28.

7 **"Searching for TV channels" will appear,** along with a scale showing channels are being memorized. The number of channels found will show on the screen as the searching progresses. This will take a few minutes, depending on the number of channels available in your area.
When the channel search finishes, "Auto ch. search complete" will appear, along with the total number of channels found.



8 **Press SYSTEM MENU.** The Recorder automatically turns off, then turns on again. You will see a DVD background screen and some Information Boxes. *See page 35.*
The Recorder is ready for use!



20 Quick Videotape Playback

Read and follow the steps below to play a videotape.

1 **Turn on the TV. Set it to channel 3 or 4 or its AUDIO/VIDEO IN channel.** This depends on how you connected the Recorder to a TV. *See pages 10-14.*

2 **With the Recorder power off, insert a videotape in the cassette compartment of the Recorder.** The VCR light will appear on the front of the Recorder.
If the power is already on, press VCR to put the Recorder in VCR mode. The VCR light will appear on the front of the Recorder.

3 **Press PLAY ▶.**

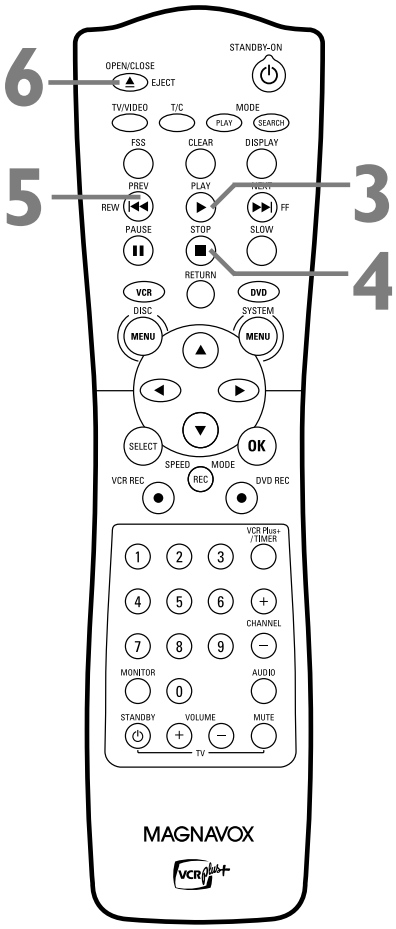
4 **Press STOP ■ to stop playback.**

5 **Press PREV/REW |◀◀ to rewind the videotape.**

6 **After the videotape stops, press OPEN/CLOSE/EJECT ▲ to remove the videotape.**

1 Turn on the TV.

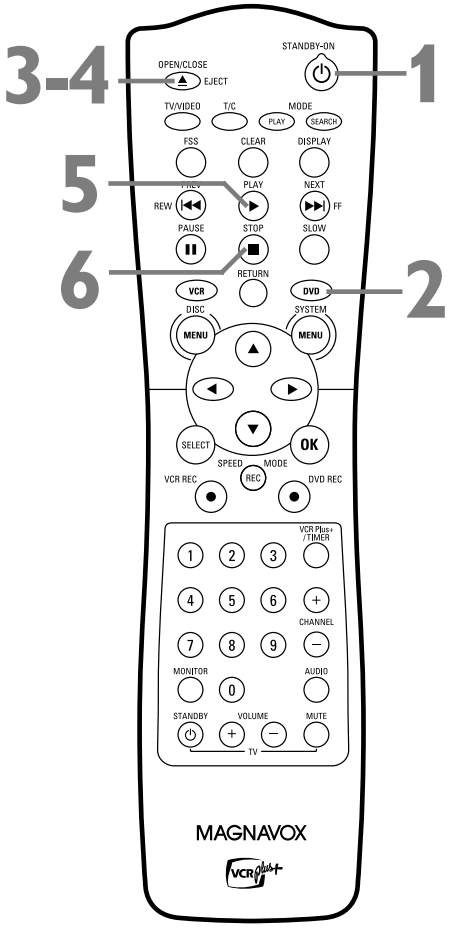
2 Insert a videotape in the cassette compartment.



Helpful Hint

- *You must connect the Recorder to a TV using the RF coaxial cable or composite video in order to use the VCR features. These hookups are explained on pages 10 and 14.*

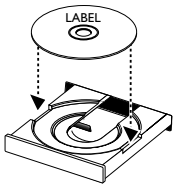
E9490UD_EN.qx3 04.8.3 11:55 AM Page 21



1 **Press STANDBY-ON ⏻ to turn on the Recorder.**
Turn on your TV. Set it to the correct Video In channel. *See pages 9-16.*

2 **Press the DVD button on the remote control so the DVD light appears on the front of the Recorder.** You should see the DVD background picture on the TV screen (if no Disc is in the Recorder).

3 **Press OPEN/CLOSE/EJECT ⏏** to open the disc tray.
Load your Disc in the tray, with the label facing up and the shiny side facing down. If the Disc (DVD) is two-sided, make sure the label of the side you want to play is facing up.



4 **Press OPEN/CLOSE/EJECT ⏏ again to close the tray.**
"Reading" will show on the display panel. The Recorder may read a Disc for several seconds.

5 **Press PLAY ► to start playback.**
- If you are playing a DVD, a Disc menu may appear. If the Title or Chapter selections are numbered, press a Number button to select an item. Or, press ▲, ▼, ◄, or ► to select an item, then press OK. Continue until you start playing the Disc. Or, follow the instructions in the DVD Disc menu.
- If you are playing a DVD+RW/DVD+R, the Index Picture Screen will appear. *See page 34.* Press ▲ or ▼ to select the Title you want to play, then press OK. If the Disc is blank, the display will show "EMPTY DISC."

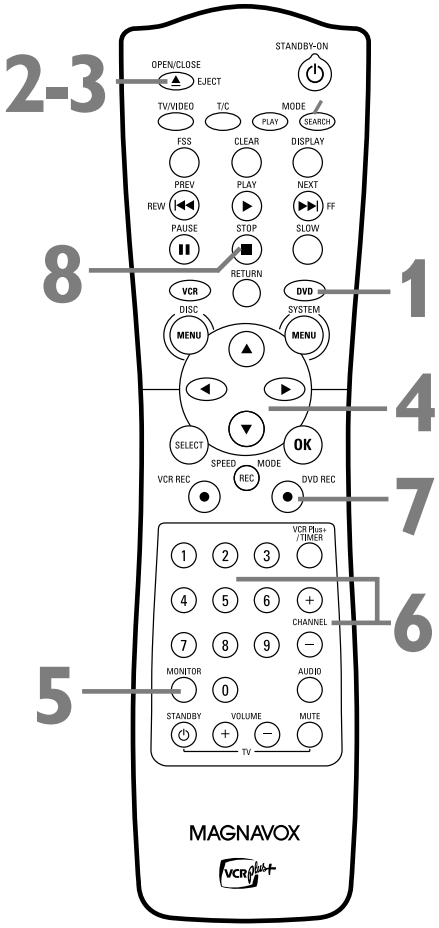
6 **To stop play at any time, press STOP ■.**
If Auto resume is On, DVD play will resume at the same point the next time you play the DVD. To play the DVD from its beginning, restart play from the DVD's Disc menu.
If Auto resume is Off, Resume I► will appear in the top left corner when you play the DVD later. While Resume I► appears, press PLAY ► to resume play from the point at which you last stopped it. Otherwise, play will start at the beginning of the DVD. Resume I► will disappear after about 15 seconds.
Auto resume is On when you purchase the Recorder. However, you can turn it On or Off. *See page 56.*

Helpful Hints

- *If the Disc is Locked by Access Control, you must enter the four-digit code or unlock the Disc. See pages 57-61.*
- *DVDs have a region code. Your Recorder will not play Discs that have a region code other than 1 (one) or ALL. See page seven.*
- *Auto resume does not affect Audio CDs. If you restart play of an Audio CD, play starts at the beginning of the Audio CD.*

22 Quick Disc Recording

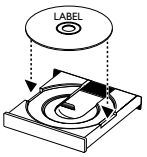
The Recorder can record TV programming onto a DVD+RW or DVD+R. Before you begin, set up TV channels. *See pages 18-19 and 28.* Use an unprotected, unfinalized, recordable DVD+RW/DVD+R.



1 **Press DVD** so the DVD light appears on the front of the Recorder.

2 **Press OPEN/CLOSE/EJECT** ▲ to open the disc tray.

3 **Insert a recordable DVD+RW/DVD+R** with the label facing up. **Press OPEN/CLOSE/EJECT** ▲ to close the disc tray. The Index Picture Screen will appear. *See page 34.* If the Disc is empty and has no recordings, "EMPTY DISC" will appear on the display panel.



4 **Press ▼ to select an empty Title box on a DVD+RW.** To avoid overwriting previous recordings on a DVD+RW, choose the last Empty Title box.
On a DVD+R, the Recorder automatically starts recording at the end of the Disc, so you do not need to select an Empty Title box. You cannot overwrite recordings on a DVD+R.

5 **Press MONITOR** to see TV channels through the Recorder.

6 **Press CHANNEL +/- or the Number buttons** to select the channel you wish to record.
To record material playing on equipment you connected to the Recorder, select EXT1, EXT2 or CAM1. Choose the EXT (External) or CAM (Camcorder) channel that matches the jack to which you connected the other equipment. *See page 17.*
If you are using a Cable Box/Satellite Receiver, set the Recorder to channel 3 or 4 (or the EXT or CAM channel). (Choose the output channel of your Cable Box/Satellite Receiver or the jacks to which you connected the Cable Box/Satellite Receiver.) Then, change TV channels at the Cable Box/Satellite Receiver. *See page 11.*

7 **Press DVD REC** ● to record the selected channel. Recording will begin after a few seconds. (The Disc has to prepare for recording.)
To pause recording, press PAUSE once on the remote.
To resume recording, press DVD REC ● again.

8 **Press STOP** ■ to stop recording. The Index Picture Screen will reappear after a few seconds. On a brief recording on a new DVD+RW, formatting the Disc will take a minute.
If you plan to play a DVD+R on another DVD Player, finalize the Disc. Follow the steps on page 55. You cannot record or edit a DVD+R after you finalize it. To edit your recordings, see page 54. However, editing changes may not be accessible when you play the Disc on other DVD Players.

Helpful Hints

- *You cannot record only Audio (sound) to a DVD+RW/DVD+R. You must record both audio and video (sound and picture).*
- *To erase a recording, see "Erase this title" details on page 50.*
- *You cannot duplicate copyrighted DVDs, videotapes, or TV broadcasts using the Recorder. "COPY PROTECT" may appear on the display panel if you attempt this.*

E9490UD_EN.qx3 04.8.3 11:55 AM Page 23

TV/VIDEO Button
Press to switch between TV and Video positions. In Video position, watch a Disc/videotape or watch/record TV programs (changing channels at the Recorder).
Use TV position to watch TV channels (changing channels at the TV) or watch one program while recording another.

PREV/REW |◀◀ Button
In DVD mode, press to return to the beginning of the current Chapter/Track. Press repeatedly to return to previous Chapters/Tracks. Press and hold for two seconds to search backward during play.
In VCR mode, press to search a videotape.
See pages 75 and 76.

PAUSE ❚❚ Button
Press to pause Disc or videotape play or recording (except OTR).

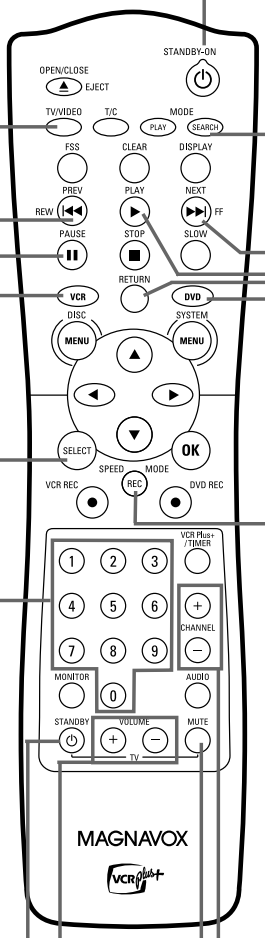
VCR Button
Press to activate the remote control in VCR mode.
Press to select the VCR output mode.

SELECT Button
In DVD mode, press to adjust timer recording settings. *See page 45.*
Press to choose Interlaced or Progressive Scan. *See page 63.*

Number Buttons
Use to select TV channels. If you have Cable TV, channels 1-125 are available. If you have an antenna, channels 2-69 are available. In DVD mode, press to select a Track or Chapter for playback.

TV STANDBY ⏻ Button
Press to turn on or off the power of some Magnavox TVs.

TV VOLUME +/– Buttons
Press to adjust the volume of some Magnavox TVs.
The TV VOLUME +/– buttons do not work with all TVs.



STANDBY-ON ⏻ Button
Press to turn on or off the power of the Recorder.

SEARCH MODE Button
In VCR mode, press for a Time Search or an Index Search. *See page 75.*

NEXT/FF ▶▶| Button
In DVD mode, press to skip to the next Chapter or Track during play. Press and hold for two seconds to search forward during play.
In VCR mode, press to search a videotape. *See pages 75-76.*

PLAY ▶ Button
Press to begin Disc or videotape playback.

RETURN Button
Press to go to a previous menu on a Video CD or some DVDs.

DVD Button
Press to activate the remote control in DVD mode.
Press to select the DVD output mode.

REC SPEED/MODE Button
Press to select a Disc or videotape recording speed.
See pages 52 and 69.
This determines the quality of the recording and the length of time you can record.

CHANNEL +/- Buttons
Press to change TV channels at the Recorder in Monitor or VCR mode.
Press to adjust videotape tracking during. *See page 77.*

TV MUTE Button
Press to mute the sound on some Magnavox TVs.
The TV MUTE button does not work with all TVs.

E9490UD_EN.qx3 04.8.3 11:55 AM Page 24

24 Remote Control (cont'd)

OPEN/CLOSE/EJECT ▲ Button
Press to open or close the Disc tray in DVD mode. Press to eject a videotape in VCR mode.

T/C Button (Title/Chapter)
Press to select "T" (Title/Track) or "C" (Chapter) in the Menu Bar. Then press ▲▼ to select the Title/Track/Chapter you want to play.
This button has no effect during Monitor mode.

FSS Button (Favorite Scene Selection)
Press to display or remove the Favorite Scene Selection menu during playback of a DVD+R or DVD+RW. *See page 54.*

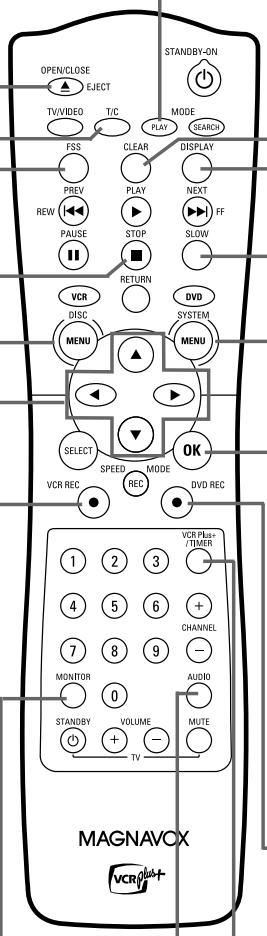
STOP ■ Button
Press to stop playback or recording.

DISC MENU Button
Press to access or remove a DVD Disc menu in DVD mode.

▲▼◀▶ Buttons
Press to select menu items.

VCR REC ● Button
Press to begin VCR recording. *See page 69.*
Press repeatedly to start a One-Touch Recording on a videotape. *See page 71.*

MONITOR Button
Press to choose Disc mode or Monitor mode. In Disc mode, use the Index Picture Screen or view Disc playback. In Monitor mode, watch TV channels through the Recorder or make a Disc recording. *See page 22.*



PLAY MODE Button
Press during Disc play to choose a Repeat, Shuffle, or Scan mode.

CLEAR Button
In DVD mode, press to delete the last entry of information into a menu. Press to clear a timer recording. *See page 47.*
In VCR mode, press to reset the videotape counter. *See page 74.*

DISPLAY Button
In VCR mode, press to see status displays. *See page 68.*

SLOW Button
Press to view a videotape in slow motion. *See page 76.*

SYSTEM MENU Button
Press to access or remove the Recorder's Setup menu. This also puts the Recorder in DVD mode automatically.

OK Button
Press to acknowledge or approve a menu selection.

DVD REC ● Button
Press to start a Disc recording. Press repeatedly to start a One-Touch Recording on a DVD+R or DVD+RW.

VCR Plus+/TIMER button
Press to set a timer recording with the VCR Plus+ programming system. *See page 46.*
Press to access or remove the Timer Recording menu in DVD mode. *See pages 45-47.*

AUDIO Button
In DVD mode, press to select a different audio language during DVD play. Multiple languages must be available on the DVD. *See page 37.*
In VCR mode, press to select HIFI or MONO. *See page 76.*

Helpful Hints

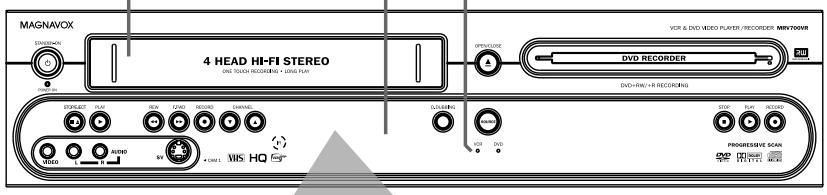
- *When VCR REC ● is pressed in DVD mode, the Recorder switches to VCR mode and starts recording on the videotape.*
- *When DVD REC ● is pressed in VCR mode, the Recorder switches to DVD mode and starts recording on the DVD+R/DVD+RW.*

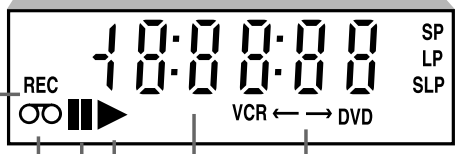
E9490UD_EN.qx3 04.8.3 11:55 AM Page 25

Cassette Compartment
Insert a video cassette here.

VCR Display Panel
Messages about current VCR operations appear here.
See Display Messages below.

VCR light (Orange)
This light appears when the Recorder is in VCR mode. You can only watch videotapes when the VCR light is on.





Appears during recording; flashes when recording is paused

Indicates the selected tape speed

Indicates a videotape is in the Recorder

Appears if videotape play is paused or during slow motion videotape play

Appears during videotape play

Indicates the elapsed playing time of a videotape; also displays the remaining time for an OTR

Appears during DVD to VCR or VCR to DVD duplication

26 Front Panel

STANDBY-ON ⏻ Button
Press to turn the power on or off.

POWER ON Light
Appears when the power is on.

STOP ■ / EJECT ⏏ Button (VCR)
Press once to stop videotape playback. When play is stopped, press to eject the videotape.

PLAY ► Button (VCR)
Press to play a videotape.
Press to release Slow, Search, or Still mode and return to playback. *See page 76.*

REW ◄◄ Button (VCR)
Press to rewind a videotape. *See page 76.*

F.FWD ►► Button (VCR)
Press to fast forward a videotape. *See page 76.*

RECORD ● Button (VCR)
Press to start a videotape recording. *See page 69.*
Press repeatedly to start a One-Touch Recording. *See page 71.*

CHANNEL ▲ ▼ Buttons
Press to select TV channels.

DVD OPEN/CLOSE ⏏ Button
Press to open or close the Disc Tray.

SOURCE Button
Press to select DVD mode or VCR mode. The DVD light appears in DVD mode. The VCR light appears in VCR mode.

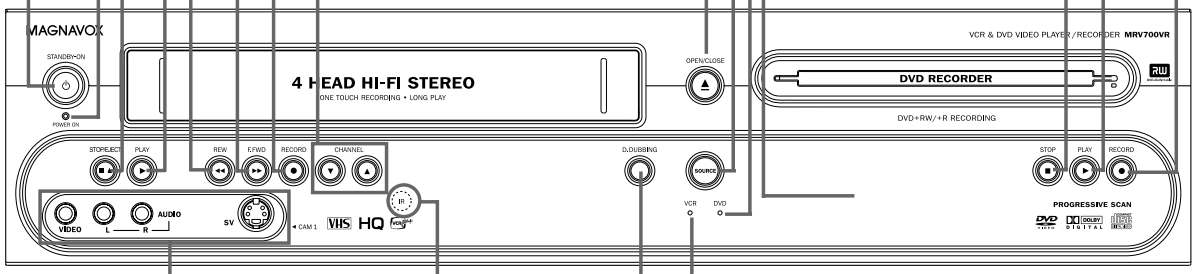
DVD Light
This light appears when the Recorder is in DVD mode.

RECORD ● Button (DVD)
Press to start a Disc recording. *See page 22.*

PLAY ► Button (DVD)
Press to start Disc playback. *See page 21.*

STOP ■ Button (DVD)
Press to stop Disc playback. *See page 21.*

DVD Display Panel
Shows Disc status in DVD mode.



VCR Light
This light appears when the Recorder is in VCR mode.

D.DUBBING Button
Press to start DVD to VCR or VCR to DVD duplication. *See pages 44 and 73.*

IR (infrared) Remote Sensor
Receives a signal from your Recorder's remote control so you can work your Recorder from a distance.
Point the remote here, not at your TV.

SV (S-Video), VIDEO and AUDIO In jacks
Use these jacks when connecting a Camcorder or other equipment to the Recorder. *See page 17.* When recording material that is playing on the other equipment, set the Recorder to CAM1 in monitor mode.

E9490UD_EN.qx3 04.8.3 11:55 AM Page 27

ANTENNA IN jack
Connect your antenna or Cable TV signal here. *See pages 10-16.*

VIDEO OUT jack (yellow)
Connect the yellow video cable (supplied) here and to the TV's Video In jack. This supplies the picture for both VCR and DVD modes. *See page 14.*

EXT2 Jacks
VIDEO IN jack (yellow)
Connect a video cable from an optional Camcorder, VCR, or DVD Player here. *See page 17.*
AUDIO IN Jacks / Left (white) and Right (red)
Connect audio cables coming from the audio out jacks of a camcorder, another VCR, another DVD Player, or Stereo here. *See page 17.* This will be useful if you want to copy a videotape or watch material that is playing on other equipment.

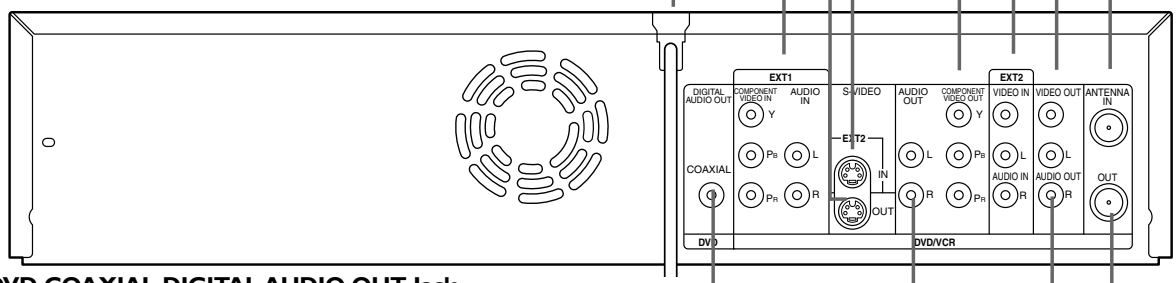
COMPONENT VIDEO OUT (Y PB PR) jacks (red, green, blue)
Connect component video cables (not supplied) here and to the Component Video In jacks of a TV. *See page 12.*

EXT2 S-VIDEO IN jack
Use an S-video cable (not supplied) to connect this jack to the S-Video Out jack of optional additional equipment. *See page 17.*

EXT2 S-VIDEO OUT jack
Connect an S-Video cable here and to a TV's S-Video In jack. *See page 13.*

EXT1 jacks
AUDIO IN jacks / Left (white) and Right (red)
Connect audio cables here and to the AUDIO OUT jacks of other equipment. *See page 17.*
COMPONENT VIDEO IN (Y PB PR) jacks (red, green, blue)
Connect these jacks to the Component Video Out jacks of optional video equipment (for example, a DVD Player). *See page 17.*

AC Power Cord
Connect to a standard AC outlet to supply power to the Recorder.



DVD COAXIAL DIGITAL AUDIO OUT Jack
Connect a coaxial digital audio cable (not supplied) here and to the Coaxial Digital Audio In jack of a Stereo. This supplies audio only for DVD mode. *See page 16.*

AUDIO OUT Jacks / Left (white) and Right (red)
Connect audio cables here and to the Audio In jacks of a TV or Stereo. These jacks supply audio for both DVD and VCR modes.
Use these for a second connection to another TV, etc.

AUDIO OUT Jacks / Left (white) and Right (red)
Connect the supplied audio cables here and to the Audio In jacks of a TV or Stereo. *See pages 12-15.* These jacks provide audio for both DVD and VCR modes.

(Antenna) OUT Jack
Use the supplied RF coaxial cable to connect this jack to the ANTENNA IN jack on your TV, Cable Box, or Satellite Receiver. *See pages 10-16.*

Helpful Hints

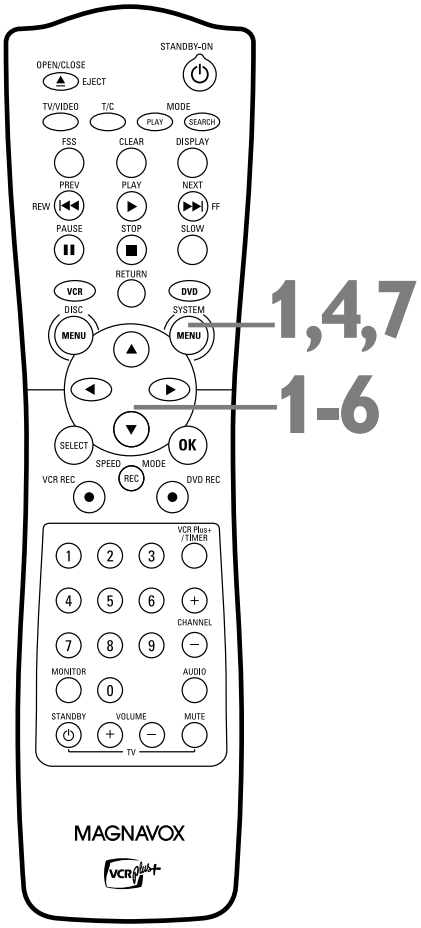
- *Use the same EXT (external) number for each pair of audio and video connections. For example, if you use EXT 2 S-VIDEO IN, use the EXT 2 AUDIO IN jacks.*
- *Do not touch the inner pins of the jacks. Electrostatic discharge may damage the unit permanently.*
- *You only need one audio and one video connection to a TV. You might not use all the jacks.*

E9490UD_EN.qx3 04.8.3 11:55 AM Page 28

28 TV Channel Programming

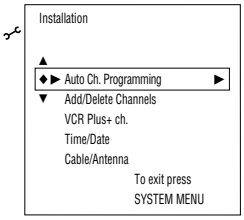
Although the Recorder selects available TV channels during Initial Setup, you may want to repeat the process later if more channels become available in your area. This will erase and replace all previously stored channels. To update the available channels, follow these steps.

- Make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.



1 **Press SYSTEM MENU. Press ◀ to select** in the top left corner of the menu bar at the top of the TV screen.

2 **Press ▼ repeatedly to select at the bottom of the second menu page, then press ▶** to enter the Installation menu.

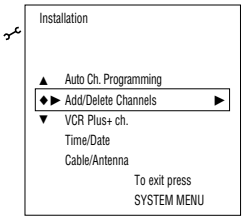


3 Auto Ch. Programming will be selected. **Press OK**. "Searching for TV channels" will appear, along with a progress scale. The number of channels found will show on the screen as the searching progresses. This will take a few minutes, depending on the number of channels available.

4 **When the channel search finishes, "Auto ch. search complete" will appear**, along with the total number of channels found.

Press SYSTEM MENU. The Installation menu will reappear.
If you are satisfied with the channels found, press SYSTEM MENU repeatedly to remove the menu. You are finished.

To add or delete additional channels, press ▼ to select Add/Delete Channels, then go to step 5.



5 **Press ▶.** A channel list will appear. Beside each channel number, you will see "Delete" or "Add."

6 **Press ▲ or ▼ to select the channel you want to add or delete, then press ◀ or ▶ to choose Add or Delete for that channel. Press OK to store your choice.** "Stored" will appear briefly in the lower left corner of the menu.
Repeat step 6 as often as necessary to add or delete all the channels you want.

7 **Press SYSTEM MENU repeatedly** to remove all the menus when you are finished.

Helpful Hints

- *Access added channels by pressing CHANNEL +/-. Deleted channels will be skipped. Delete channels you rarely watch. You still can select deleted channels with the Number buttons.*
- *If new channels become available, or if you receive a channel the Recorder did not set, add the channel.*
- *The Recorder detects whether you connected an Antenna or Cable TV signal. If you are not receiving the correct channels, reset your channels. Follow steps 1-2 above. Press ▼ to choose Cable/Antenna, then press ▶. Press ▶ or ◀ to choose Cable, Anten. (antenna), or Auto (for the Recorder to detect automatically). Press OK. "Stored" will appear briefly in the lower left corner of the menu. Press SYSTEM MENU. Press OK again to reset the channels. When the search ends, press SYSTEM MENU repeatedly to clear the screen.*

E9490UD_EN.qx3 04.8.3 11:55 AM Page 29

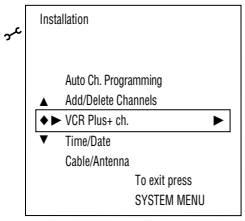
If you intend to use the VCR Plus+® programming system, program the Recorder with your local channel information. This will only take a few minutes. Since the channel numbers of the stations you receive may not be the same as the station numbers, and since channel numbers differ from area to area, you must set up channels in order for the system to work efficiently. Before you begin, make sure you have 1) a cable TV channel list, if applicable (you can request one from your cable TV company), and 2) a chart that lists VCR Plus+ channel numbers, which you can find in your TV guide or the TV listings of your local newspaper.

- Make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.

1 **Press SYSTEM MENU. Press ◀ to select** in the top left corner of the menu bar at the top of the TV screen.

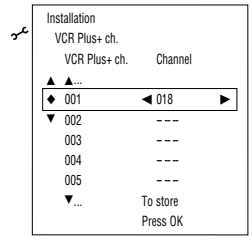
2 **Press ▼ repeatedly to select** **at the bottom of the second menu screen, then press ▶** to enter the Installation menu.

3 **Press ▲ or ▼ to select VCR Plus+ Ch. (channel), then press ▶.**

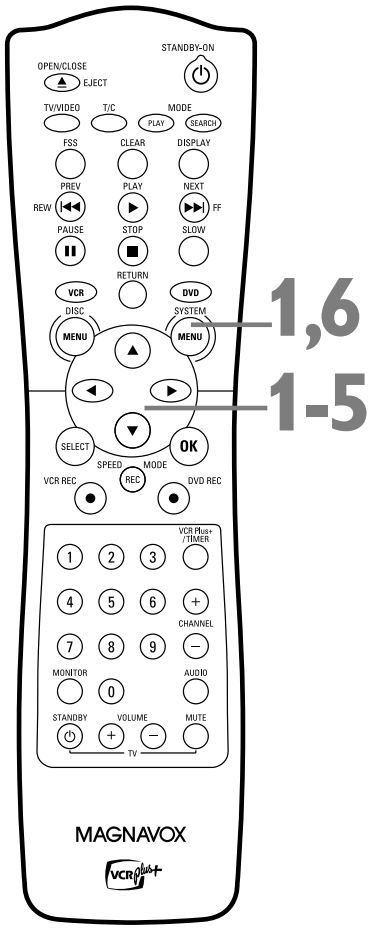


4 **Press ▲ or ▼ to select a VCR Plus+ Ch. number, then press ◀ or ▶ to enter the corresponding Channel number from your TV guide list.**
Refer to the list from your local newspaper or TV guide for the VCR Plus+ channels and corresponding TV channel numbers for your area. These are the numbers you will enter as the Channel number as you complete the chart on the screen.

5 **Press OK to store the Channel number.** "Stored" will appear briefly in the lower left corner of the menu. Repeat steps 4-5 as often as necessary to complete the chart.



6 **When you are finished, press SYSTEM MENU repeatedly** to remove all the menus.



Channel Line-Up Chart		
Call letters (Local TV station)	Guide Channel (Guide channel number)	TV Channel (Local channel number)

Helpful Hint

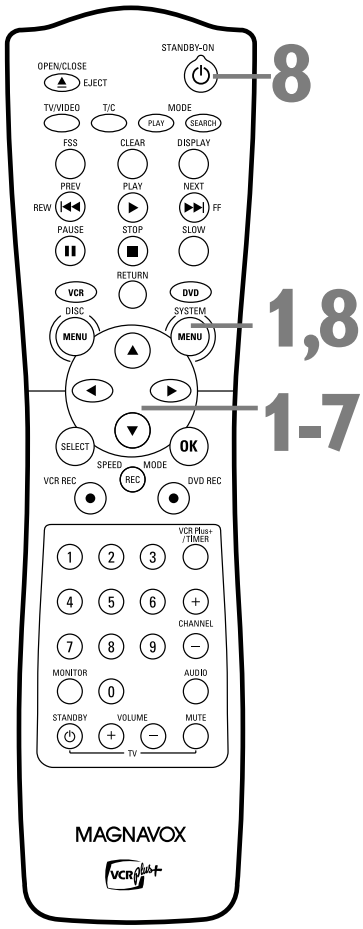
- *Only memorized channels will be available at step 4. To add more channels, see page 28.*

30 Clock Setting

Time/Date Automatic

The Recorder can set the time and date automatically by referring to a PBS station. If the Recorder chooses an incorrect PBS channel or sets the time/date incorrectly, set the clock manually. *See page 31.*
Before you begin, make sure TV channels are set. *See page 28.*

- Make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.



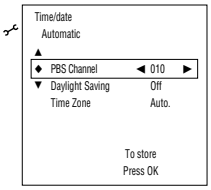
1 **Press SYSTEM MENU. Press ◄ to select** in the top left corner of the menu bar at the top of the TV screen.

2 **Press ▼ repeatedly to select at the end of the second menu screen, then press ►** to enter the Installation menu.

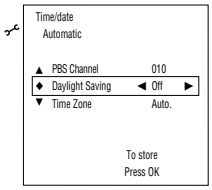
3 **Press ▼ repeatedly to select Time/Date, then press ►.**

4 Automatic will be selected. **Press ►.**

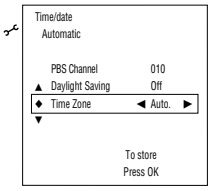
5 **With PBS Channel selected, press ◄ or ► to choose the channel number of your PBS station, then press OK.**
If you do not know your PBS channel number, choose Auto. The Recorder will choose a PBS station for you and set the time.
If you want to set the clock manually, choose Off. The Recorder will not update the time automatically according to a PBS station.



6 **Press ▼ to choose Daylight Saving. Press ◄ or ► to choose On, Off, or Auto, then press OK.** Choose Auto if you want the clock set according to the PBS station's Daylight Savings Time schedule.



7 **Press ▼ to choose Time Zone. Press ◄ or ► repeatedly to choose your time zone, then press OK.**
If you want the Recorder to use the time zone from which your PBS station broadcasts, choose Auto. But, if your PBS station broadcasts from a different time zone than the one in which you live, be sure to select your time zone instead.



8 **Press SYSTEM MENU repeatedly to remove the menus. Press STANDBY-ON ⏻ to turn off the Recorder.** In a few minutes, the time will appear on the display panel on the front of the Recorder.
If the Recorder cannot find the time, you may see an error message when you turn on the Recorder. Check the PBS channel and try again. Or, set the clock manually. *See page 31.*

Helpful Hints

- *The Recorder may set the clock when you complete Initial Setup. If the correct time appears on the display, you do not need to reset the clock.*
- *The factory default setting of Daylight Saving is On.*
- *The Recorder can use the PBS channel to set the clock only if the PBS channel is a memorized channel. To set up channels, see page 28.*

E9490UD_EN.qx3 04.8.3 11:55 AM Page 31

Time/Date Manual

If the Recorder does not set the time and date correctly using the Time/Date Automatic feature, set the clock manually by following the steps below. Manual clock setting overrides Automatic clock setting.

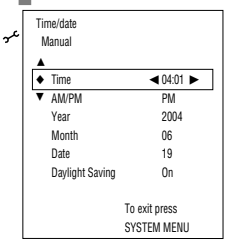
- Make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.

1 **Press SYSTEM MENU. Press ◄ to select** in the top left corner of the menu bar at the top of the TV screen.

2 **Press ▼ repeatedly to select at the end of the second menu, then press ►** to enter the Installation menu.

3 **Press ▼ repeatedly to select Time/Date, then press ►.**

4 **Press ▼ to choose Manual, then press ►.**



5 Time will be highlighted. **Press ◄ or ► to choose the correct time in hours and minutes, then press OK**. Or, press the Number buttons to quickly enter the time in hours and minutes, then press OK.

6 **Press ▼ to choose AM/PM, then press ◄ or ► to choose AM or PM. Press OK.**

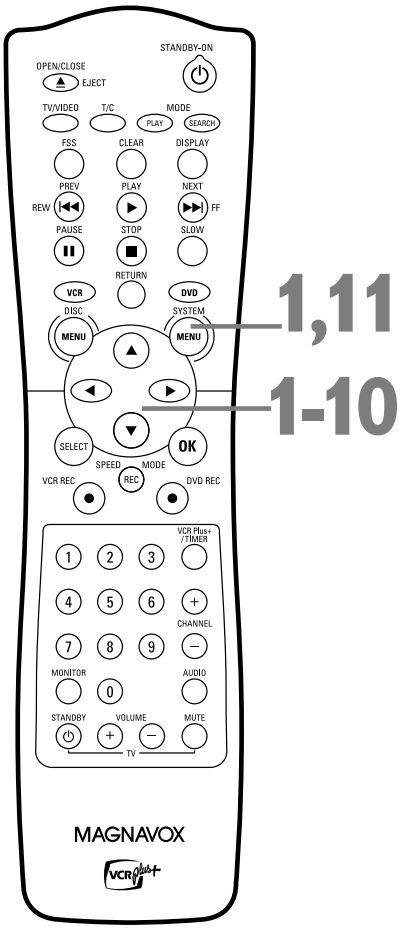
7 **Press ▼ to choose Year, then press ◄ or ► to choose the current year. Press OK.**

8 **Press ▼ to choose Month, then press ◄ or ► to choose the current month. Press OK.**

9 **Press ▼ to choose Date, then press ◄ or ► to choose the current date. Press OK.**

10 **Press ▼ to choose Daylight Saving, then press ◄ or ► to choose On or Off. Press OK.**

11 **Press SYSTEM MENU** repeatedly to remove all menus.



Helpful Hints

- *In order for the clock to remain set as you specified manually, you may need to set Daylight Saving to Off.*
- *If you set up channels again as described on page 28, you may need to reset your clock.*
- *If you change any item manually (Time, AM/PM, Year, Month, Date, Daylight Saving), PBS Channel will change to Off automatically. See page 30.*

32 Menu Bars

You can use the Menu Bars to access or operate some DVD or Recorder features. You cannot access the Menu Bars during recording.
When a Menu Bar is on the screen, press ▲, ▼, ◄, and ► on the remote to select or change an item.

Menu Bar 1

***Press SYSTEM MENU once to access Menu Bar 1. The following items are in Menu Bar 1.** Depending on the available Disc features, you may not be able to access each item at all times. Only available features can be selected.

User Preference Settings Set your preferences for Disc audio and video quality, depending on the equipment you connected to the Recorder. Also set up Languages, Access Control, Record Settings, Remote Control settings, Installation features, and other Recorder features as detailed throughout this manual.

Title/Track Select to choose an available Disc Title or Track for playback. Use the Number buttons or ▲ or ▼ to select the Title you want. Play will start automatically.

Chapter Select to choose an available Disc Chapter for playback. Use the Number buttons or ▲ or ▼ to select the Chapter you want. Play will start automatically.

Audio Language If the current DVD has multiple audio soundtracks, choose one here. For example, some DVDs let you play the movie in other languages or hear a director's commentary during playback. Check the Disc case for details. *See page 37.*

Subtitle Language If the current Disc has subtitles, select a language here. *See page 37.*

Angle Select to choose a different camera angle, if available, during DVD play. *See page 38.*

Zoom Select to enlarge the DVD picture by 2, 3, or 4 times the normal size during playback. *See page 38.*

Menu Bar 2

***While in Menu Bar 1, press ► repeatedly to move to Menu Bar 2. The following items may be available in Menu Bar 2.**

Sound Mode Select to choose a sound mode: Stereo (st) or Dolby Surround compatible (sur). *See page 39.*

Frame-by-frame playback Select for forward or reverse frame-by-frame playback. Press ▼, then press ◄ or ► to move the DVD or Video CD picture backward or forward one frame at a time. *See page 39.*

Slow motion Select to slow the speed of DVD, DVD+R, or DVD+RW playback. *See page 40.*

Fast motion Select to play a DVD, DVD+R, or DVD+RW forward or backward at four, eight, or 32 times the normal play speed. Press ▼, then press ◄ or ► to choose a backward (-) or forward speed.

Time Search Select to enter a specific time within the current Title or Track at which you want play to begin. *See page 41.*

E9490UD_EN.qx3 04.8.3 11:55 AM Page 33

On-screen Symbols

The following symbols will appear briefly on the TV screen when you activate some Disc features.

Repeat Chapter The current Chapter will play repeatedly. *See page 42.*

Repeat Title The current Title will play repeatedly. *See page 42.*

Repeat All The entire Disc will play repeatedly. *See page 42.*

Repeat A Point A for Repeat A-B play-back has been entered. *See page 42.*

Repeat A-B A segment of the Disc will play repeatedly. *See page 42.*

OFF Each repeat option will appear in turn every time you press PLAY MODE. OFF will appear at the last.

Shuffle The Tracks or Chapters will play in random order. To start shuffled play, press PLAY MODE repeatedly until "shuffle" appears on the TV screen.

Scan The first 10 seconds of each Chapter/Track will play. *See page 41.*

Angle Multiple angles are available. *See page 38.*

Locked The current Disc is Locked and cannot play. *See pages 57-61.*

Safe The current Disc is authorized for playback. *See pages 57-61.*

"X" The feature you just attempted is not available on the current Disc or at the current time.

Status Box

The Status Box shows the current status of the Recorder and information about the current Disc, including Disc type and playing time. Set Status box to On if you want to see the following icons briefly when you access a feature. *See page 62.*

Disc status icons

recording

stop

pause play

pause recording

fast forward

fast reverse

slow motion

Disc type icons

DVD+R

DVD+RW

DVD-Video

Super Video-CD

Video-CD

no Disc

Disc error

34 Index Picture Screen

The Index Picture Screen shows your recordings on a DVD+RW or DVD+R. It appears automatically when you insert a DVD+R or DVD+RW or when you stop playback or recording. The Disc must contain recordings.
An Index Picture represents each recording. Next to the Index Picture is the program name, length of recording, recording mode/speed, and date of recording. If the recording has no name, the recording source and time will appear instead (for example, the recorded TV channel and the time at which you started recording the channel).
Empty disc areas (erased Titles or blank space at the end of the Disc) also appear in the Index Picture Screen. "Empty title" and the amount of remaining recording time appear beside the empty Index Picture box.
The Index Picture Screen will dim after several minutes of no use. To brighten the Index Picture Screen again, use the Recorder or its remote control.

Titles

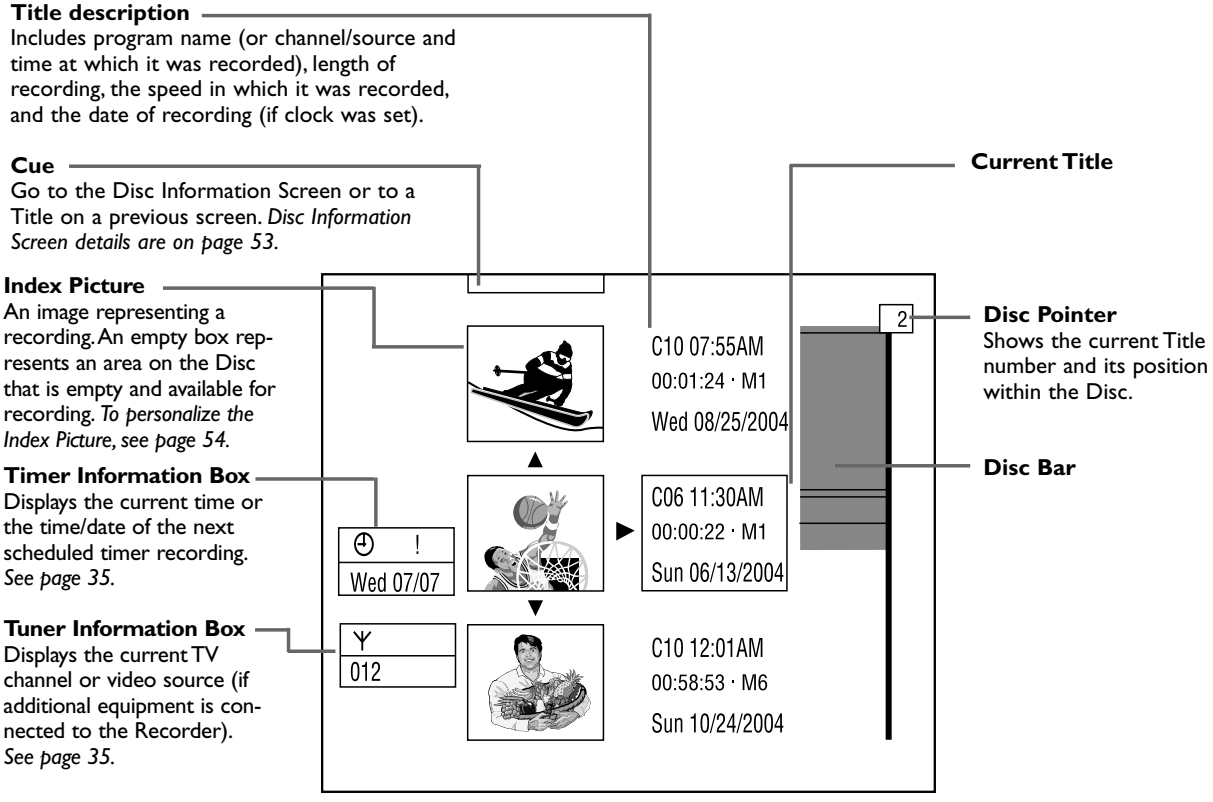
The Index Picture Screen shows three Titles per screen. Press ▲ or ▼ to move to other recordings.
Press STOP ■ to move directly to the first recording on the Disc.

Disc Bar

The Disc Bar appears at the right of the Index Picture Screen. This overviews all recordings on the Disc, as well as any empty spaces.
On the Disc Bar, the Disc Pointer indicates your current position on the Disc. You can press and hold the NEXT/FF ▶▶| button to scroll through the Disc Bar. Moving through the recordings by pressing ▲ or ▼ also moves the Disc Pointer. On a DVD+RW, resume play or recording from this point by pressing OK for playback or DVD REC ● for recording. Later recordings will be overwritten. On a DVD+R, resume play from the Disc Pointer location by pressing OK. However, on a DVD+R, recording begins at the last empty title space when you press DVD REC ●.

Title Settings Menu

When you select an Index Picture, press ▶ to go to its Title Settings Menu. You can name, play, or erase the Title. *See page 50.*


Title description
Includes program name (or channel/source and time at which it was recorded), length of recording, the speed in which it was recorded, and the date of recording (if clock was set).
Cue
Go to the Disc Information Screen or to a Title on a previous screen. Disc Information Screen details are on page 53.
Index Picture
An image representing a recording. An empty box represents an area on the Disc that is empty and available for recording. To personalize the Index Picture, see page 54.
Timer Information Box
Displays the current time or the time/date of the next scheduled timer recording. See page 35.
Tuner Information Box
Displays the current TV channel or video source (if additional equipment is connected to the Recorder). See page 35.
Current Title
Disc Pointer
Shows the current Title number and its position within the Disc.
Disc Bar
C10 07:55AM
00:01:24 · M1
Wed 08/25/2004
C06 11:30AM
00:00:22 · M1
Sun 06/13/2004
C10 12:01AM
00:58:53 · M6
Sun 10/24/2004
Wed 07/07
012
2

E9490UD_EN.qx3 04.8.3 11:55 AM Page 35

Warning box

Appears near the bottom of the TV screen when appropriate. *Examples and details are on page 48.*

Tuner Information box

Appears briefly on the left side of the TV screen in Monitor mode and identifies the current TV channel or Video source. For example, if EXT1 appears in the Tuner Information Box, you can view or record the material playing on the equipment connected to the EXT1 IN jacks on the rear of the Recorder. To receive TV stations, make sure you have connected an Antenna or Cable TV signal to the ANTENNA IN jack on the Recorder. *See pages 10-16.* Press MONITOR to go into Monitor mode and view TV channels.

Current TV channel

No signal - Channel is not receivable or no equipment is connected to the designated jack.

Copy-protected signal

Timer Information box

Displays the start time or date of the next scheduled timer recording and appears in the Index Picture Screen. You cannot remove it.
It appears briefly at the beginning of a timed One-Touch Recording. It does not appear during recording or Disc playback.

Timer recording due later today

Timer recording set for another day within the upcoming year

The time at which the current One-Touch Recording will end.

Current time; no timer recordings are scheduled.

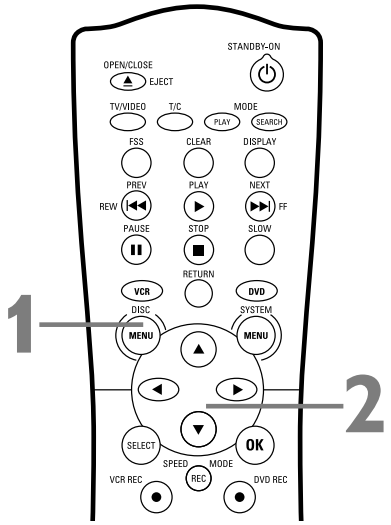
36 Title/Disc Menus, Chapter/Track Selection

Title/Disc Menus

- Before you begin, make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.

1 **Press DISC MENU during Disc play.**
For a DVD, if the current Title has a menu, the Title menu will appear on the screen. Otherwise, the Disc menu will appear. The menu will list features available on the current DVD and will vary for every DVD.
For a DVD+RW or DVD+R, the Index Picture Screen will appear.
See page 34.

2 **Press ▲or ▼ to select items in the menu or Index Picture Screen, then press OK.** Repeat this process until you set up all the features you want or until play begins.

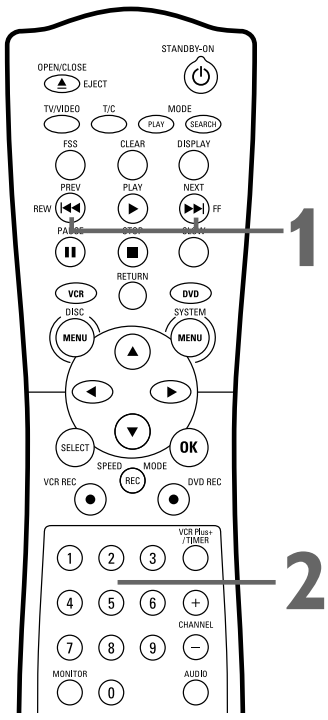


Chapter/Track Selection

- Before you begin, make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.

1 **Press NEXT/FF ▶▶| during play to go to the next Track/Chapter. Press PREV/REW |◀◀ once to return to the beginning of the current Track/Chapter.** Press PREV/REW |◀◀ repeatedly to step back to previous Tracks/Chapters.

2 **Or, to go directly to any Track/Chapter during play, press the Number buttons to enter the Track/Chapter number.** If you enter an invalid number, the current Track/Chapter may continue to play. Or, an incorrect Track/Chapter may begin to play. Make sure the Track/Chapter number you enter is available on the Disc. Make sure the Chapter is available within the current Title. The Menu Bar will disappear automatically in a few seconds, or you can press SYSTEM MENU to remove it quickly.



E9490UD_EN.qx3 04.8.3 11:55 AM Page 37

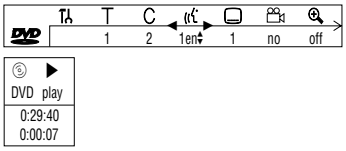
Audio Language

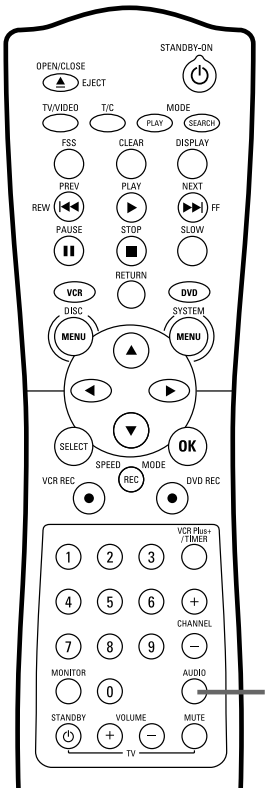
Some DVDs are recorded in different languages. For example, you may be able to watch the same movie in French, Spanish, etc. The movie may have special audio features, such as a director's commentary or music soundtrack. If these are available on the DVD, access the different languages or featured soundtracks by following these steps.

- Before you begin, make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.

1 **During DVD play, press the AUDIO button.**
Audio will be selected in the Menu Bar.

2 **Within five seconds, press the AUDIO button repeatedly to see the different languages available.** Or, press ▲ or ▼ repeatedly to see the different languages. The language you select will be audible in a few seconds; the Menu Bar will disappear.
The languages or options may be abbreviated. For example, French may be "Fr." See your Disc case for details on available audio features and explanations.





1-2

Subtitles

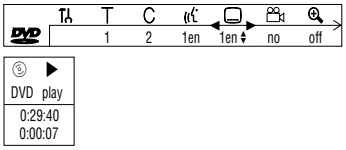
Some DVDs include subtitles in different languages. Or, material you recorded onto a DVD+RW or DVD+R might include subtitles. To choose subtitles, follow these steps.

- Before you begin, make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.

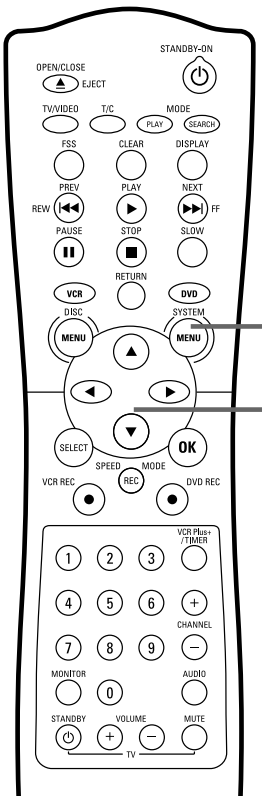
1 **During play, press SYSTEM MENU so Menu Bar 1 appears at the top of the TV screen.**

2 **Press ► repeatedly to select (Subtitle) in the Menu Bar.**

3 **Press ▲ or ▼** to see the available subtitle languages. Subtitles will appear after a few seconds.
You can choose subtitles only if they are available on the Disc. The languages may be numbered or abbreviated, such as "En" for English.



4 **Press SYSTEM MENU to remove the Menu Bar.**



1,4

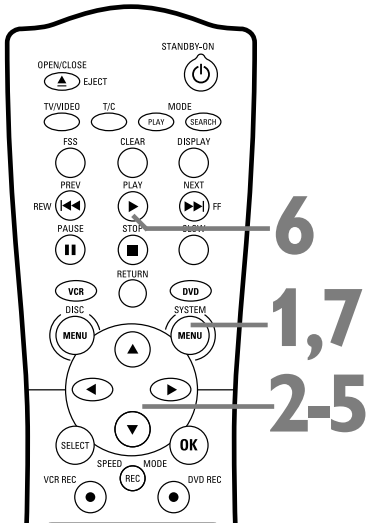
2-3

38 Zoom, Camera Angle

Zoom

Zooming lets you enlarge the video image during play and pan through the enlarged image.

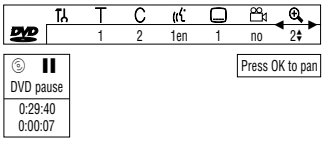
- Before you begin, make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.



1 **During play, press SYSTEM MENU so Menu Bar 1 appears at the top of the TV screen.**

2 **Press ► repeatedly to select (Zoom) in the Menu Bar.**

3 **Press ▲ or ▼ to choose 2, 3, or 4.** Play will pause. The still picture will appear at 2, 3, or 4 times the normal size.



4 **To move the enlarged picture (pan), press OK. Then, press ▲, ▼, ◄, or ► to move the picture.**

5 **Press OK again to see the still, zoomed picture without the Menu Bar**.

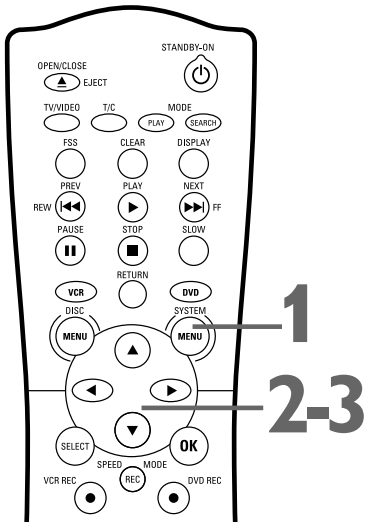
6 **To return to regular play, press PLAY ►.**

7 **Press SYSTEM MENU to remove the Menu Bar again.**

Camera Angle

Some DVDs include scenes recorded from different angles or perspectives. To watch segments from a different angle, follow these steps.

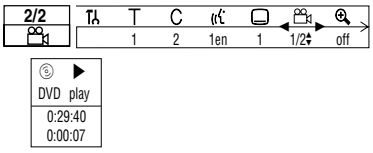
- Before you begin, make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.



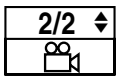
1 **During DVD play, press SYSTEM MENU so Menu Bar 1 appears at the top of the TV screen.**

2 **Press ► repeatedly to select (Angle) in the Menu Bar.**

3 **Press ▲ or ▼ to select a different angle.** In a few seconds, play changes to the selected angle.



If the Angle symbol appears in the top left corner of the TV screen during play, multiple angles are available. Simply press ▲ or ▼ to switch among the different angles.



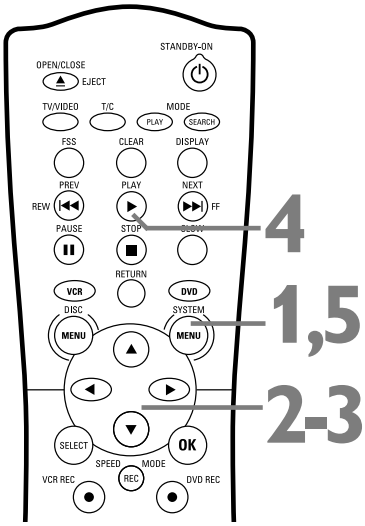
E9490UD_EN.qx3 04.8.3 11:55 AM Page 39

Still Picture/Frame-by-frame Play

To quickly pause play, press PAUSE ❚❚ on the remote. To advance the still picture one frame at a time, press PAUSE ❚❚ repeatedly. To resume play, press PLAY ►.

To freeze the picture using the Menu Bar, follow these steps.

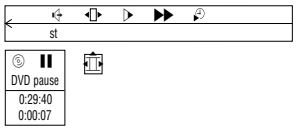
- Before you begin, make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.



1 **Press SYSTEM MENU during play so Menu Bar 1 appears.**

2 **Press ► repeatedly to select in Menu Bar 2.**

3 **Press ▼ to freeze the picture. Press ◄ or ► to move the picture backward or forward one frame at a time.**
Do not leave a still picture on your TV more than five minutes. This may etch the image onto your picture tube permanently. Other still visual elements, such as TV station logos or video games, also will damage your TV if left too long.



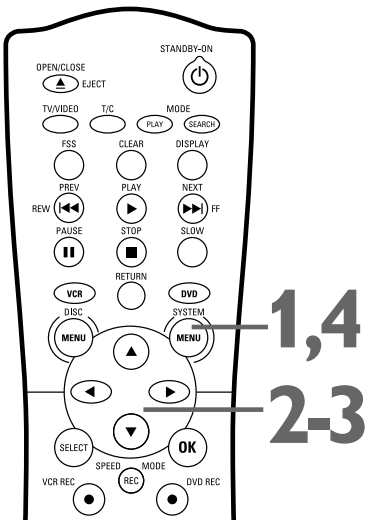
4 **Press PLAY ► to resume regular play.**

5 **Press SYSTEM MENU to remove the Menu Bar.**

Sound

Choose a sound setting based on the capabilities of the equipment to which you connected the Recorder. *See pages 10-16 and 65.*

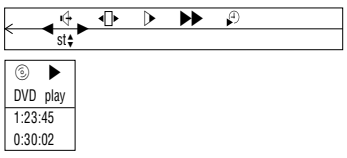
- Before you begin, make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.



1 **During play, press SYSTEM MENU so Menu Bar 1 appears at the top of the TV screen.**

2 **Press ► repeatedly to select in Menu Bar 2.**

3 **Press ▲ or ▼ to select st (stereo) or sur (Dolby Surround).**
Select st (stereo) to hear stereo sound. This will work with equipment that has right and left audio jacks (usually red and white). Select sur (Dolby Surround) if your audio equipment is compatible with Dolby Surround. If it is, usually a Dolby Pro Logic logo will appear on the equipment.



4 **Press SYSTEM MENU to remove the Menu Bar.**

Helpful Hint

- *The Recorder also refers to Sound settings as Analog output. The sound the Recorder sends to your Stereo or TV is analog, or two-channel, left and right. You are using analog sound if you used the red/white, left/right, Audio jacks. See page 65. Whether you adjust the sound here or as described on page 65, the results will be the same.*

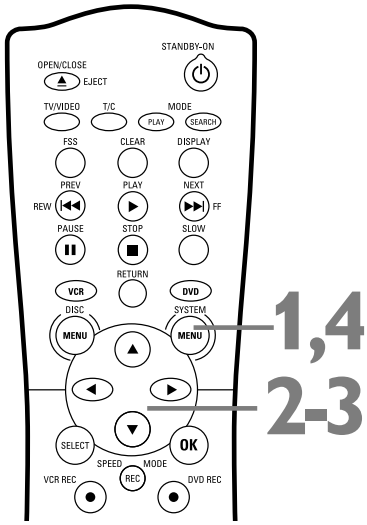
E9490UD_EN.qx3 04.8.3 11:55 AM Page 40

40 Slow Motion, Searching

Slow Motion

To use the Menu Bar for slow motion, follow these steps.

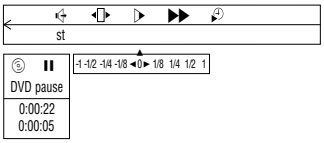
- Before you begin, make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.



1 **During Disc play, press SYSTEM MENU so Menu Bar 1 appears at the top of the TV screen.**

2 **Press ► repeatedly to select ▷ (Slow motion) in Menu Bar 2, then press ▼.** Play will pause.

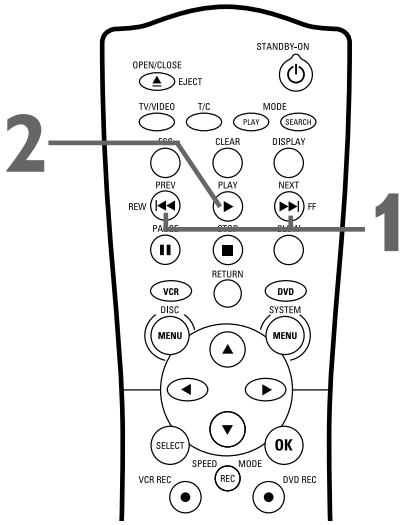
3 **Press ◄ or ► to select the required speed: -1, -1/2, -1/4 or -1/8 (backward), or 1/8, 1/4, 1/2 or 1 (forward).** The Disc will start to play at the speed you selected, for example, one-half as fast as normal (1/2).
Select 1 or press PLAY ► to play the Disc at normal speed again.
Select 0 or press PAUSE ❚❚ on the remote control to pause the picture.



4 **Press SYSTEM MENU** to remove the Menu Bar.

Searching

- Before you begin, make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.



1 **To search a Disc at four times the normal speed, press and hold NEXT/FF ►►I or PREV/REW I◄◄ during play.** Repeat this to search at eight or 32 times the normal speed. The sound will be mute.
On an Audio CD, press and hold NEXT/FF ►►I or PREV/REW I◄◄ during play to search the Disc at four times the normal speed. Sound will be intermittent. Repeat this to search at eight times the normal speed. The sound will be mute. Each press of NEXT/FF ►►I or PREV/REW I◄◄ switches between the slower and faster search speed.

2 **Press PLAY ► to resume normal play.**

E9490UD_EN.qx3 04.8.3 11:55 AM Page 41

Time Search

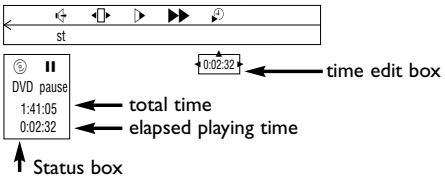
Time Search lets you choose a specific elapsed playing time at which you want to begin playback.

- Before you begin, make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.

1 **Press SYSTEM MENU during Disc play so Menu Bar 1 appears at the top of the TV screen.**

2 **Press ► repeatedly to select in Menu Bar 2.**

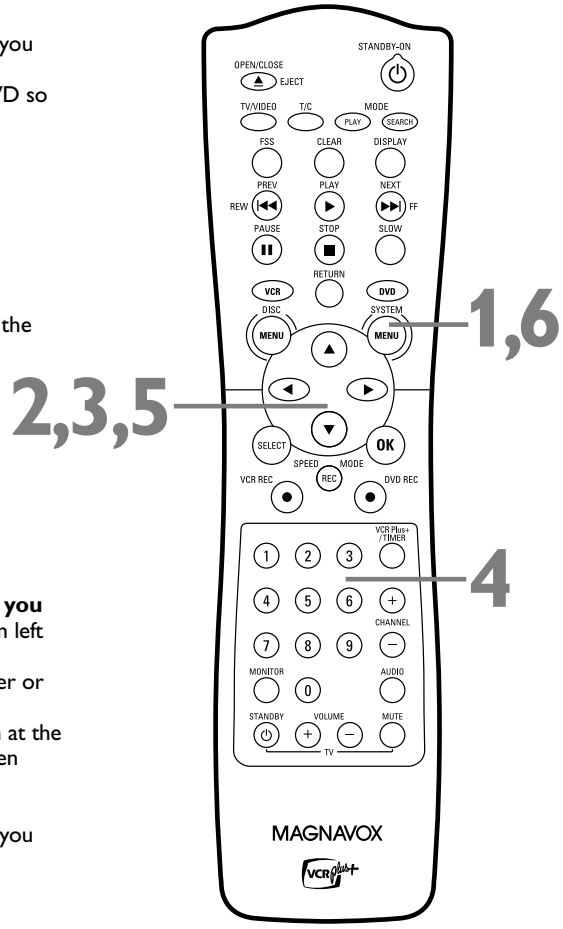
3 **Press ▼.** Play will pause. A time edit box will appear, showing the elapsed playing time of the current Chapter or Disc.



4 **Press the Number buttons to enter the time at which you want play to begin.** Enter the hour, minutes, and seconds from left to right in the box.
The time must be within the possible time of the current Chapter or Disc. If it is not, play will not begin after you press OK at step 5. Instead, a space in the time edit box will blink. Or, play may begin at the wrong time. Refer to the Status box to see the time available, then enter a correct time.

5 **Press OK.** After a few seconds, play will resume at the point you selected.

6 **Press SYSTEM MENU** to remove the Menu Bar.



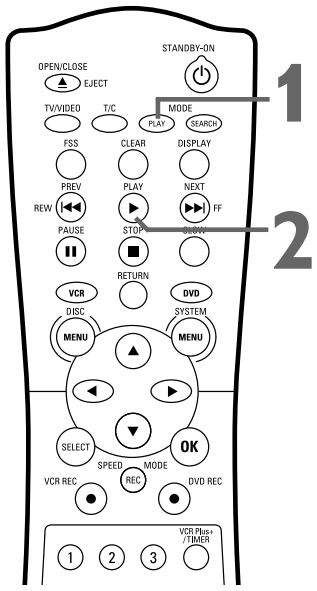
Scan

Scanning plays the first 10 seconds of each Chapter/Track on the Disc.

- Before you begin, make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.

1 **Press PLAY MODE repeatedly during play until "scan" appears on the TV screen.** Starting with the current Chapter/Track, the first 10 seconds of each Chapter/Track will play. This will continue until the end of the Disc is reached or you resume regular playback.

2 **To stop scanning and continue regular play, press PLAY ►.**

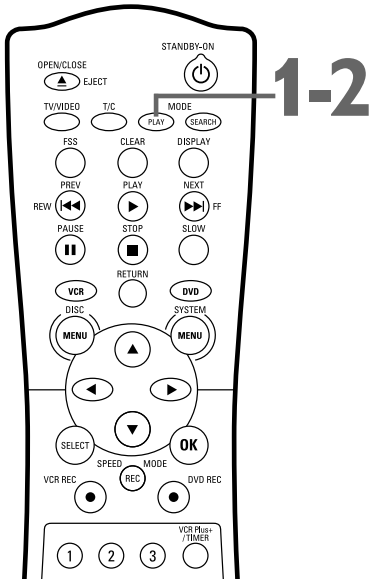


42 Repeat, Repeat A-B

Repeat

You may play a Chapter, Track, Title or entire Disc repeatedly. All Discs do not allow all the repeat options. You cannot play a DVD+R or DVD+RW repeatedly. Check your Disc for details.

- Before you begin, make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.



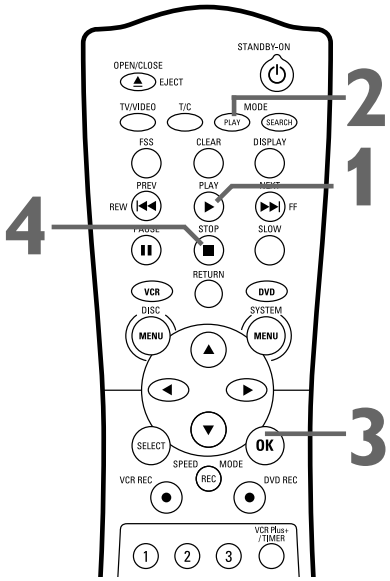
1 **During Disc play, press PLAY MODE repeatedly to choose a Repeat option.** Depending on the type of Disc, you may choose to play the Chapter, Track, Title, or Disc repeatedly.
During DVD or Video CD play, the repeat symbols will appear briefly on the TV screen. *See page 33.*

2 **To cancel repeat play, repeatedly press PLAY MODE** to choose "off" or until all the repeat symbols or messages disappear from the screen.

Repeat A-B

You also may set the Recorder to play only a specific portion of a Title, Chapter, or Track repeatedly. Follow these steps.

- Before you begin, make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.



1 **Press PLAY ► to start Disc play.**

2 **When the Disc reaches the point at which you want repeated play to begin, press PLAY MODE until the "repeat-A" symbol appears on the TV screen.**

3 **When the Disc reaches the point at which you want to end the segment, press OK.** The "Repeat A-B" symbol will appear on the TV screen briefly. The segment will begin playing repeatedly.

4 **To cancel Repeat A-B play, press STOP ■.**

E9490UD_EN.qx3 04.8.3 11:55 AM Page 43

- Before you begin, make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.

1 **Insert a recordable DVD+RW or DVD+R into the Recorder.**

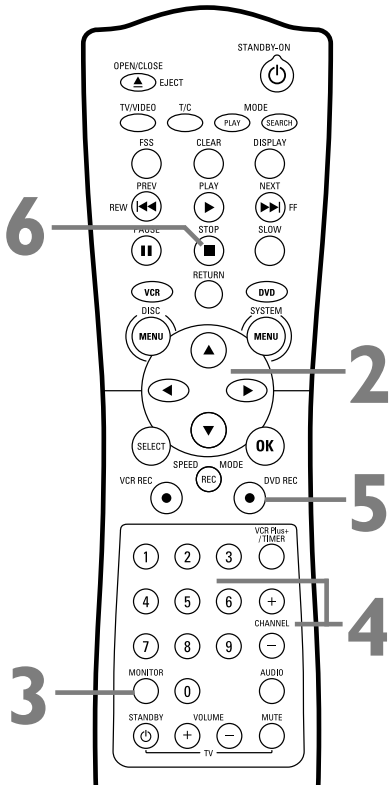
2 **In the Index Picture Screen of a DVD+RW, press ▲ or ▼ to select an Empty Title** (or empty Index Picture box) on the Disc that has enough time for the recording. Or, select the place at which you want to start the new recording in order to overwrite other recordings.
You may skip this step if you use Safe Record. See step 5.
Or, if you are using a DVD+R, you may skip this step. Recordings on a DVD+R are made at the end of the Disc automatically. Previous recordings are not overwritten.

3 **Press MONITOR** to see TV channels through the Recorder. Make sure you have programmed channels. *See page 28.*

4 **Press CHANNEL +/- or the Number buttons to select the channel you wish to record.**
If you are using a Cable Box/Satellite Receiver, enter channel 3 or 4 (the output channel of your Cable Box/Satellite Receiver) or the EXT channel (that corresponds to the jacks to which you connected the Cable Box/Satellite Receiver). Set the channel you want to record at the Cable Box/Satellite Receiver. Leave it on for the recording.

5 **Press DVD REC ● twice to start a 30-minute recording. Press DVD REC ● repeatedly to record longer timed recordings.** The length of recording available depends on the current recording mode/speed and the amount of time available on the Disc. *Recording mode/speed details are on page 52.* Recording will begin about 30 seconds after you press DVD REC ●. (The Disc takes this time to prepare for recording.)
Or, use Safe Record to have the Recorder automatically find the empty space at the end of a DVD+RW; this prevents overwriting other recordings. To do so, press and hold DVD REC ● for about two seconds, or until SAFE REC appears on the Recorder's display panel. Then, press DVD REC ● repeatedly to choose the time length you want for your recording.
If you press DVD REC ● only once, or press and hold DVD REC ● one time and immediately start Safe Record, the Recorder will record the current channel or source until the end of the Disc is reached.

6 **Press STOP ■ if you need to stop the recording before the designated end time.** Otherwise, the Recorder will automatically stop recording at the designated end time, then turn itself off.



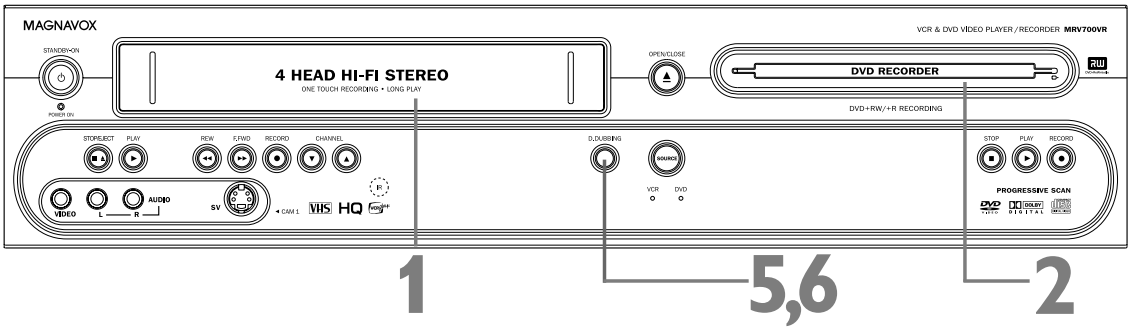
- *If you plan to play a DVD+R on another DVD Player, finalize the Disc. Follow the steps on page 55.*
- *To edit your recordings, see page 54. However, editing changes may not be accessible when you play the Disc on other DVD Players.*
- *To erase a recording, see "Erase this title" details on page 50.*

Helpful Hints

- *"Disc locked" will appear on the TV if a protected DVD+RW or DVD+R is in the Recorder. Recording is not possible.*
- *If the power fails during recording, the Index Picture Screen may not match the actual video content on the Disc. The last recorded Title may be lost. A power failure or unit failure/system crash also may destroy all the material recorded on a Disc.*
- *If no free space remains on the DVD+R, DISC FULL will appear. Recording is not possible.*
- *Press SYSTEM MENU during recording to access or remove the Status box, Tuner Information box, and/or Timer Information box. See pages 33 and 35.*
- *The recommended operating temperature range for the Recorder is from 32°F-122°F (Fahrenheit) for DVD+RW recording and 32°F-104°F for DVD+R recording. Exceeding these ranges may cause unstable recording results.*

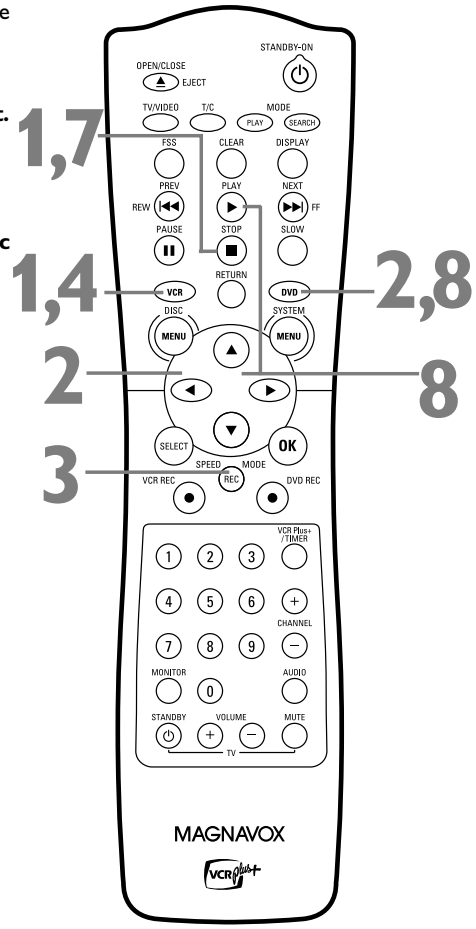
E9490UD_EN.qx3 04.8.3 11:55 AM Page 44

44 Videotape to DVD Duplication



Follow the steps below to copy a videotape to a DVD+R or DVD+RW. This will be possible only if the videotape is not copy protected.

- Before you begin, turn on the TV and set it to channel 3 or its Video Input.



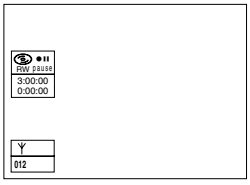
1 **Put the videotape you want to copy in the cassette compartment.** With the Recorder in VCR mode, play the tape to the point at which you want to start recording, then press **STOP ■**.

2 **Press DVD** to put the Recorder in DVD mode. **Insert a recordable DVD+R/ DVD+RW** in the disc tray. **Use ▲ or ▼ to select a blank Disc portion on** which you can make the new recording.

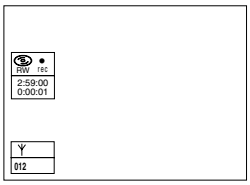
3 **Press REC SPEED/MODE** to choose a recording speed. *See page 52.*

4 **Press VCR** so the VCR light appears on the front of the Recorder again**.**

5 **Press D.DUBBING on the front of the Recorder.** The unit will be in recording standby mode.



6 **Press D.DUBBING on the front of the Recorder again to start recording.** 'REC' will appear on the display panel.



7 **To stop recording, press STOP ■.** Wait for the Index Picture Screen to appear. This may take several minutes. Your new recording will show in the Index Picture Screen.

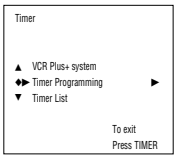
8 The unit will be in VCR mode. To watch the new recording on the DVD+R/DVD+RW, **press DVD to put the Recorder in DVD mode. Use ▲ or ▼ to select the new Title, then press PLAY ►.**

E9490UD_EN.qx3 04.8.3 11:55 AM Page 45

- Before you begin, make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.

1 **Press VCR Plus+/TIMER.**

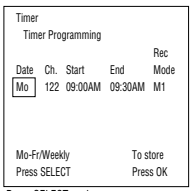
2 **Press ▲ or ▼ to select Timer Programming, then press ►.**



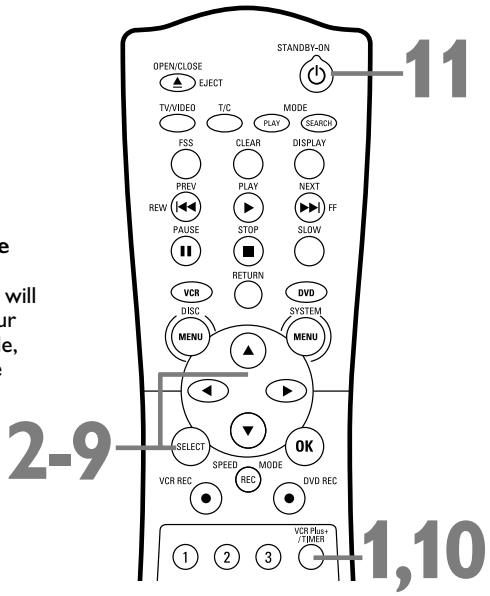
3 Date will be selected. **Press ▲ or ▼ to enter the month and date you want the recording to start.**
Press SELECT repeatedly to choose: the date (timer recording will occur once on the day you choose); **Mo-Fr** (timer recording will occur every weekday at the same time); **or a day of the week** (for example, Mo for Monday; timer recording will occur every Monday at the same time). **When the date is correct, press ►.**

Press SELECT once.
Recording will happen one time on the day you chose.

Press SELECT again.
Recording will happen every day, Monday-Friday, starting on the day you chose.



Press SELECT again.
Recording will happen on the same day every week, starting the day you chose.



4 Ch. (channel) will be selected. **Press ▲ or ▼ to enter the channel you want to record, then press ►.**
If you are using a Cable Box/Satellite Receiver, enter channel 3 or 4 (the output channel of your Cable Box/Satellite Receiver) or the EXT channel (that corresponds to the jacks to which you connected the Cable Box/Satellite Receiver). Set the channel you want to record at the Cable Box/Satellite Receiver. Leave it on for the recording.

5 Start will be selected. **Press ▲ or ▼ to enter the time at which you want recording to begin - in hours and minutes.**
Press SELECT repeatedly to choose AM or PM.
When the Start time is correct, press ►.

6 End will be selected. **Press ▲ or ▼ to enter the time at which you want recording to stop. Press SELECT repeatedly to choose AM or PM. When the End time is correct, press ►.**

7 Rec Mode (Record Mode) will be selected. **Press ▲ or ▼ to choose a recording speed: M1, M2, M2x, M3, M4, or M6.**
See page 52.

8 Check your timer information. If something is incorrect, press ◄ or ► to choose the incorrect data. Use **▲ or ▼** to enter the correct data.

9 **When the information is correct, press OK.** Stored will appear at the bottom of the screen, then the Timer menu will reappear.

10 **Press VCR Plus+/TIMER to remove the menu.**

11 **Put a recordable DVD+RW or DVD+R in the Recorder. Press STANDBY-ON ⏻ to turn off the Recorder.** For the timer recording, the Recorder will turn itself on, record, then turn itself off when finished.
If you plan to play a DVD+R on another DVD Player, finalize the Disc. Follow the steps on page 55.

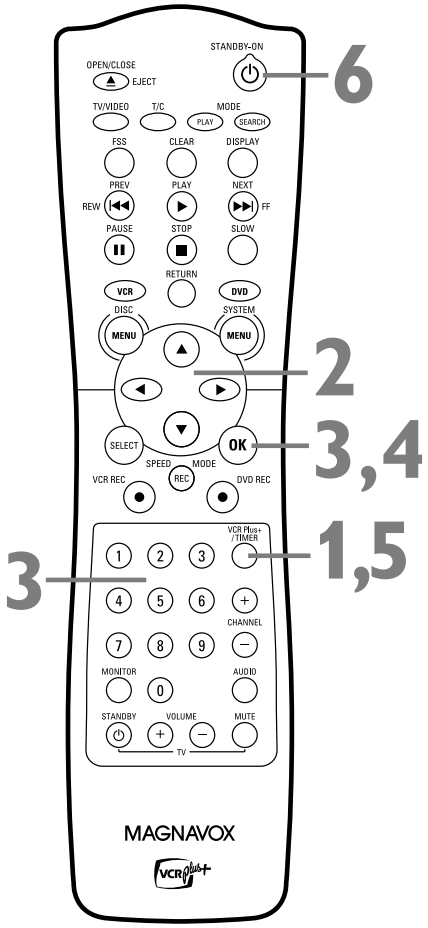
Helpful Hints

- *You can enter the Date, Channel, Start, and End information with the Number buttons. Enter channel numbers as a three-digit number. For example, for channel 15, press 1,5.*
- *Press STANDBY-ON ⏻ on the remote to turn off the Recorder and stop a timer recording that is in progress.*
- *You cannot select Timer Programming if six recordings are set. Delete a recording, then set a new one. See page 47.*
- *Set a Timer recording and turn off the Recorder five minutes before the recording will start. (You can use the Recorder normally until that time.)*
- *Set the timer recording one minute ahead of the program's start time. This helps ensure the entire program is recorded. The Disc needs about 30 seconds to prepare for recording.*
- *You cannot change channels during recording.*
- *To edit your recordings, see page 54. Editing changes may not be accessible when you play the Disc on other Players.*
- *TIMER will appear on the display panel if a Timer Recording is set.*

46 VCR Plus+® Timer Recording (DVD mode only)

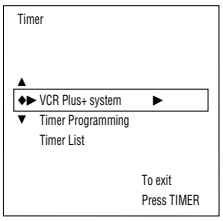
A PlusCode® number is a number of up to eight digits, printed in most TV guides next to the start time of a TV program. You can schedule a timer recording quickly by entering the code for your TV program.
Before you begin, complete the VCR Plus+® channel setup. *See page 29.*

- Before you begin, make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.

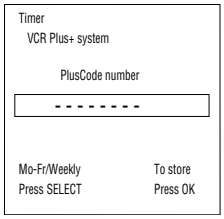


1 **Press VCR Plus+/TIMER on the remote control.**

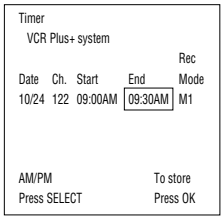
2 **Press ▲ to select VCR Plus+ system, then press ►.**



3 **Press the Number buttons to enter the PlusCode number from your TV guide, then press OK.** If you make a mistake, press CLEAR to erase the PlusCode number, then enter it correctly. Information about the timer will appear. If information is missing or not available, you may be asked to enter more information. Follow the instructions on the screen. You may be asked to enter a channel number if you have not set up VCR Plus+ channels. *See page 29.*



4 **If the timer recording information seems correct and complete, press OK.** Stored will appear at the bottom of the screen briefly. The Timer menu will reappear.



5 **Press VCR Plus+/TIMER** to remove the menu.

6 **Put a recordable DVD+RW or DVD+R in the Recorder. Press STANDBY-ON ⏻ to turn off the Recorder at least five minutes before the timer recording is set to begin.** The Recorder must be off in order for the timer recording to occur.
If you plan to play a DVD+R on another DVD Player, finalize the Disc. See page 55.
To edit your recordings, see page 54. However, editing changes may not be accessible when you play the Disc on other DVD Players.

Helpful Hint

- *You cannot select VCR Plus+ system if six timer recordings are set. Delete a recording first.*

E9490UD_EN.qx3 04.8.3 11:55 AM Page 47

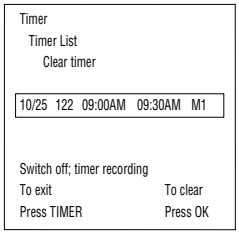
- Before you begin, make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.

1 **Press VCR Plus+/TIMER.**

2 **Press ▼ to choose Timer list, then press ►.**

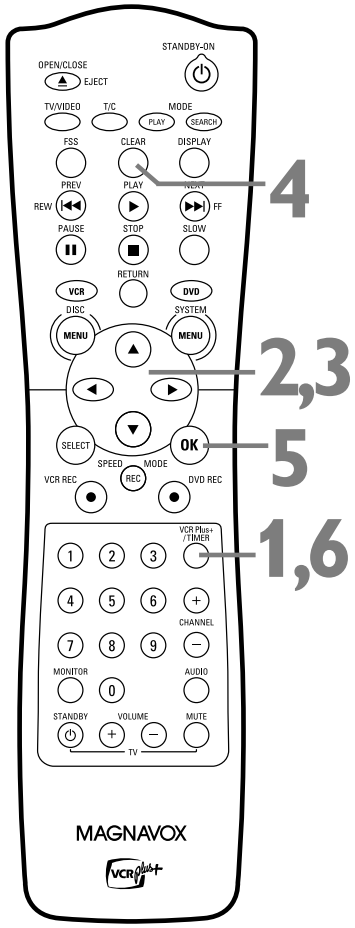
3 **Press ▲ or ▼ to highlight the timer recording you want to erase.**

4 **Press CLEAR.** The recording you selected will appear alone on the screen beneath "Clear Timer."



5 **Press OK to erase the timer recording.** "Timer Cleared" will appear at the bottom of the screen briefly, then the Timer List will reappear. (If you decide not to erase the timer recording, press the VCR Plus+/TIMER button instead. The Timer List will reappear.)

6 **Press VCR Plus+/TIMER repeatedly to remove the menus.**



Helpful Hint

- ***Press STANDBY-ON ⏻ on the remote to turn off the Recorder and stop a timer recording that is in progress.***

E9490UD_EN.qx3 04.8.3 11:55 AM Page 48

48 Error Messages

These messages may appear while or after you set a timer recording.

Collision
The timer recording overlaps with another timer recording. Timer recordings that overlap or conflict with another will appear in a red highlight in the Timer List.
- To ignore the message, press VCR Plus+/TIMER repeatedly to remove all the menus. The program with the earlier start time will record completely, then the remainder of the later program will record.
- Change one or both timer recordings. *See page 45.*
- Delete one of the timer recordings. *See page 47.*

Please enter channel number
The VCR Plus+ programming system does not recognize the TV channel.
- Use the Number buttons to enter the required channel number, then press OK. *See page 29.*

PlusCode number wrong
You entered an incorrect the PlusCode number.
- Enter the correct information or press VCR Plus+/TIMER repeatedly to quit.

Weekend programming not possible
You entered an incorrect date or chose a daily (Mo-Fr) recording. You can only use daily programming for recordings that will occur Monday, Tuesday, Wednesday, Thursday, or Friday.

Clock not set
You cannot access the Timer menu if the clock is not set. The clock setting screen appears when you select Timer menu. *See pages 30-31 to set the clock.*
This message also may appear if you turn on the Recorder while the PBS channel is downloading the time. Turn off the Recorder for a few minutes to let the download finish.

Data error
Make sure all information for the timer recording is correct and complete. Refer to the on-screen menu instructions or this manual to correctly set a recording.

Insert recordable disc
There is not a DVD+R or DVD+RW in the Recorder. Put a recordable DVD+R or DVD+RW in the disc tray before turning off the Recorder for the timer recording.

Memory full
There are six Timer recordings set. You cannot set more than six at a time.

Disc locked
A protected DVD+RW or DVD+R is in the Recorder. Recording is not possible on the current Disc. You may be able to change Protection to "Unprotected." *See page 53.*

Switch off; timer recording
This is a reminder to turn off the Recorder for a scheduled timer recording.

Helpful Hint

- *You cannot duplicate copyrighted DVDs, videotapes, or TV broadcasts using the Recorder. "COPY PROTECT" will appear on the display if you try to dub or record copyrighted material onto a DVD+R or DVD+RW using the Recorder.*

E9490UD_EN.qx3 04.8.3 11:55 AM Page 49

1 **Press DVD REC ● to record the current TV channel.**

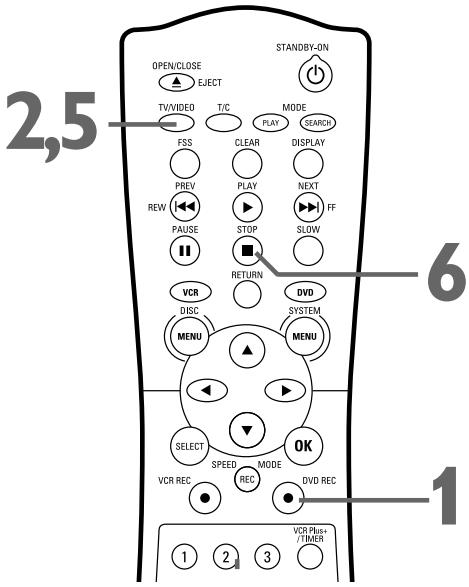
2 **Press TV/VIDEO on the remote to put the Recorder in TV position.** TV will appear briefly on the Recorder's display panel.

3 **Use the TV remote control to select the channel you want to watch at the TV.**

4 **To return to the recording, use the TV remote control to reselect the TV channel at which you usually view the Recorder.** This may be a Video In channel or channel 3 or 4, depending on how you connected the Recorder to the TV. The channel being recorded will reappear on the TV screen.

5 **Press TV/VIDEO on the Recorder's remote control to return the Recorder to VIDEO position.** VIDEO will appear briefly on the Recorder's display panel.

6 **To stop recording, press the STOP ■ button.**



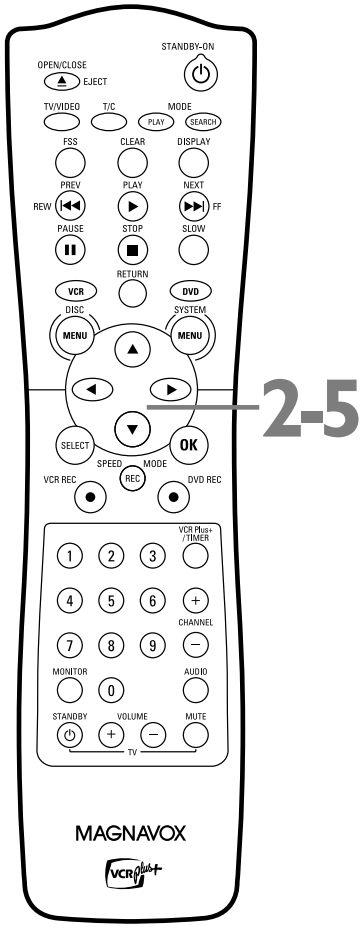
3 Select the channel you want to watch at the TV.

4 Reselect the Video In channel at the TV.

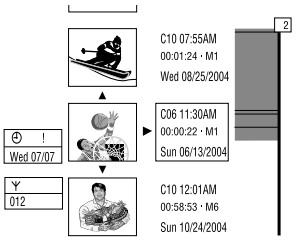
50 Title Settings Menu

The Title Settings Menu lets you rename a Title or a recording on a DVD+RW/DVD+R. From the same menu, you can play or erase a Title.

- Before you begin, make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.



1 When DVD+RW or DVD+R play is stopped, the Index Picture Screen will appear. *See page 34.*



2 **Press ▲ or ▼ to select the Index Picture of the recording you want to name, play, or erase, then press ►.** The Title settings menu will appear.

3 **Press ▲ or ▼ to select Name, Play full title, or Erase this title. Continue as directed in step 4.**

4

● **Name**

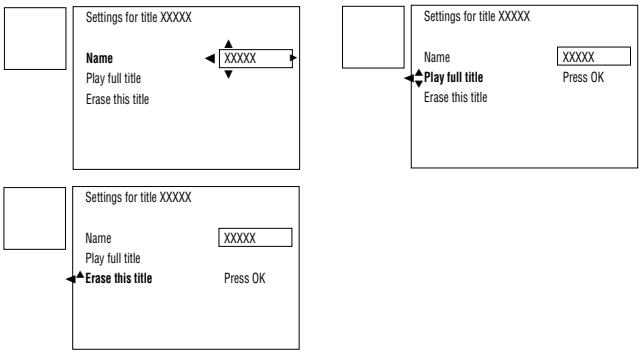
Press ►. The first character of the Title name will be selected.
Press ▲ or ▼ to change the character.
Press SELECT to switch between upper and lower case letters. Press CLEAR to erase a character. To move to the next or previous character, press **◄ or ►**.
Repeat this process until you have finished naming the Title.
When the Title is complete, press OK. "Storing name" will appear while the name is stored.

● **Play full title**

Press OK. The Disc will play from the beginning of the Title you selected.

● **Erase this title**

Press OK. The Recorder will ask you to confirm that you really want to erase the entire Title. **Press OK again to start erasing the Title.** "Erasing title" will appear during erasure. When erasing is complete, the Index Picture Screen will reappear.
(If you do not want to erase the Title, press ◄ to return to the Title Settings menu instead.)



5 **Press ◄ to return to the Index Picture Screen if necessary.**

Helpful Hints

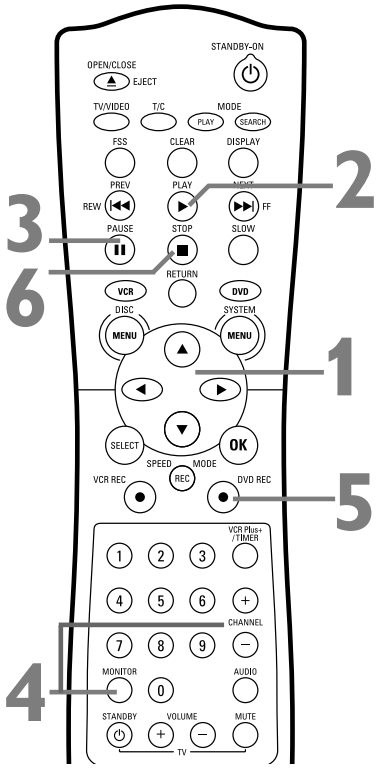
- *If you erase a Title from a DVD+R, you cannot reuse the space for other recordings. Recordings are always made at the end of a DVD+R.*
- *Unless you change the Title name, it will contain the source/channel and time that you recorded.*

E9490UD_EN.qx3 04.8.3 11:55 AM Page 51

Append recording

To add a new video recording to a previously recorded Title, follow these steps. This feature is not available on DVD+Rs, which always record at the end of the Disc.

- Before you begin, make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.



1 **In the Index Picture Screen, press ▲ or ▼ to select the Title to which you want to add a recording.**

2 **Press PLAY ►.**

3 **When you reach the point at which you want to add the new recording, press PAUSE ❚❚.**

4 **Press MONITOR, then press CHANNEL +/- to select the channel (or other equipment) you want to record.**

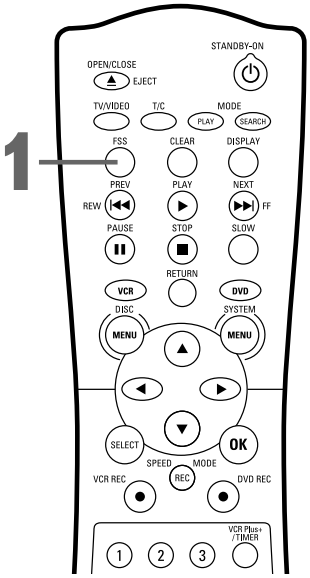
5 **Press DVD REC ●.** The new recording will start at the point you selected and overwrite the video material beyond this point, including later Titles.

6 **Press STOP ■** to stop recording.

Chapter Markers

Chapter Markers let you move easily through recordings by pressing NEXT/FF ▶▶| or PREV/REW |◀◀ to select a chapter during play. This lets you access specific points on a DVD+RW/DVD+R much as you would choose a Chapter on a DVD.

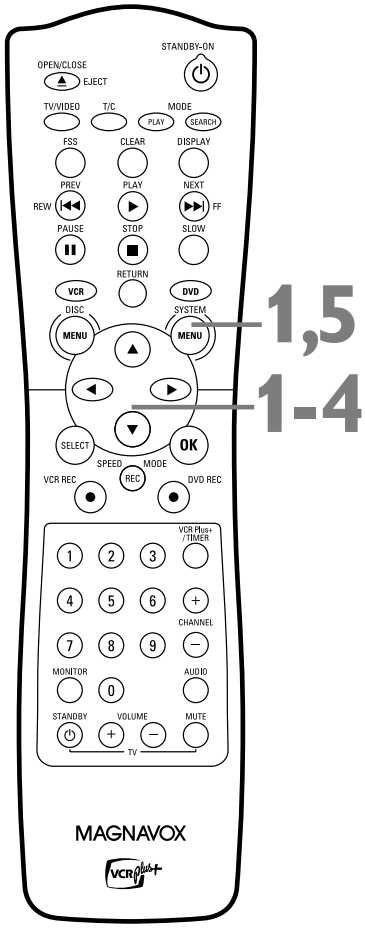
- Before you begin, make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.



1 **Press FSS during recording to insert a Chapter marker at the current position.** "Inserting chapter marker" will appear. The maximum number of markers varies per Disc. When the maximum number is reached, "Too many chapters" may appear. Delete some Chapter markers before inserting more. *See page 54.*
You also may insert Chapter markers after recording. *See page 54.*

52 Record Settings

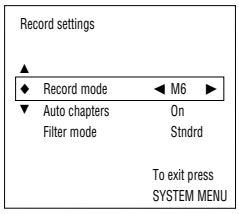
● Before you begin, make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.



1 **Press SYSTEM MENU. Press ◄ to select** in the top left corner of the menu bar at the top of the TV screen.

2 **Press ▼ repeatedly to select** **in the second menu screen, then press ►** to enter the Record Settings menu.

3 **Press ▲ or ▼ to select Record mode, Auto chapters, or Filter mode, then proceed as detailed in step 4.**



4 ● **Record mode**
Press ◄ or ► to choose M1, M2, M2x, M3, M4, or M6, then press OK. Recordings will be made in the speed you selected. The recording mode defines the picture quality of recordings and the maximum recording time for a Disc. You can play a Disc only in the mode in which it was recorded. See the chart below for details.

● **Auto chapters**
Press ◄ or ► to choose On or Off, then press OK. If you choose On, the Recorder will insert a Chapter marker every five to six minutes during recording. To disable this feature, select Off.
You can insert additional Chapter markers after recording. *See page 54.*
Or, insert Chapter markers during recording. *See page 51.*

● **Filter mode**
Press ◄ or ► to choose Stndrd (Standard) or Sport, then press OK. Select Sport to improve recording of images that move quickly. Otherwise, choose Stndrd.

5 **Press SYSTEM MENU repeatedly to remove the menus.**

Mode	Picture quality	Recording time per Disc
M1	Highest quality; least recording time per Disc	1 hour
M2	Equals quality of a pre-recorded DVD	2 hours
M2x	Better quality than an S-VHS videotape	2.5 hours
M3	Equals quality of an S-VHS videotape	3 hours
M4	Better quality than a VHS videotape	4 hours
M6	Equals quality of a VHS videotape	6 hours

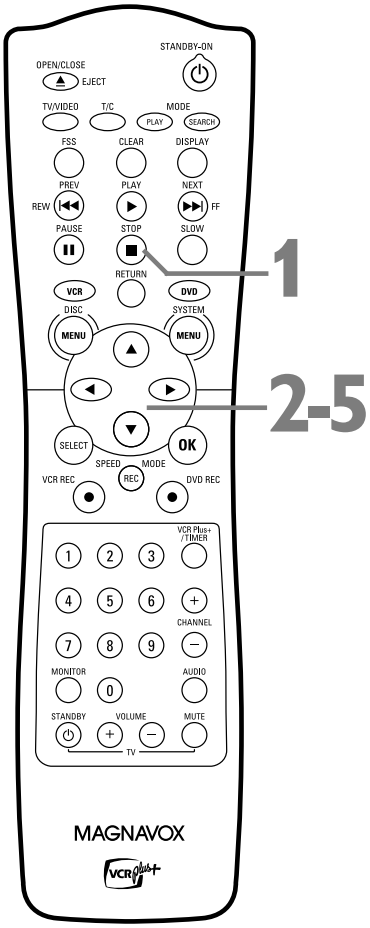
Helpful Hints

- *If you set Record mode to a low-quality speed, set it to a high-quality speed after you finish recording. Leaving the Recorder set to a low-quality speed may affect the picture quality when playing DVDs later.*
- *VHS represents Video Home System. S-VHS represents Super-Video Home System. These videotapes are commonly used for home video recordings on VCRs or Camcorders.*

E9490UD_EN.qx3 04.8.3 11:55 AM Page 53

You can change Disc settings for a DVD+RW/DVD+R from the Disc Information Screen.

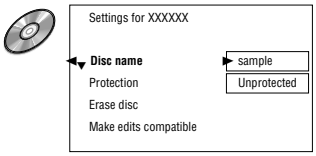
- Before you begin, make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.



1 **When in the Index Picture Screen, press STOP ■ to select the first Title on the DVD+RW/DVD+R.**

2 **Press ▲ to enter the Disc Information Screen.**

3 **In the Disc Information Screen, press ► to enter the Settings menu.**



DVD+RW example

4 **Press ▲ or ▼ to select Disc name, Protection, Erase disc (DVD+RW only), Make edits compatible (DVD+RW only), or Finalize disc (DVD+R only). Proceed as follows, depending on which feature you want to adjust.**

● **Disc name (DVD+RW and DVD+R)**
Press ►. Press ◄ or ► to choose the character position, then press ▲ or ▼ to enter a character. Press SELECT to alternate between capital and lower case characters. Press CLEAR to erase a character (the space will remain). Repeat this process until you enter the complete name. **To save the name, press OK.** "Storing name" will appear briefly.

● **Protection (DVD+RW and DVD+R)**
Press ►. Press ▲ or ▼ to select Protected or Unprotected, then press OK. If you protect the Disc, you cannot make any further changes to the Disc, including recording. "Disc locked" will appear on the TV screen briefly if you attempt recording. Choosing Protected also disables most editing features.
To edit or record again, select Unprotected.
Remember, protecting a DVD+R is not the same as finalizing it. Finalization cannot be undone.

● **Erase disc (DVD+RW only)**
Press OK. "This will erase all titles Press OK to confirm" will appear. **Press OK again to begin erasing.** (If you decide not to erase the Disc, press ◄.) "Erasing disc" appears until erasing is complete. When the Disc is erased, the Index Picture Screen will reappear, showing the free space on the Disc.

● **Make edits compatible (DVD+RW only)**
Press OK. "This will take XX" and "Press OK to confirm" will appear to indicate how long the action will take.
Press OK again. "Working .." and a progress percentage bar will appear until the action is complete. The Index Picture Screen will reappear when the process is complete.

● **Finalize Disc (DVD+R only, if not finalized already)**
Press OK. "Finalizing" will appear until finalization is complete. This may take a few minutes. Then, the Index Picture Screen will reappear.
You cannot unfinalize a DVD+R, and you cannot record or edit the DVD+R after you finalize it.
A DVD+R will play on other DVD Players only after the Disc is finalized.

5 **If necessary, press ◄ when you are finished** and want to return to the Disc Information Screen.

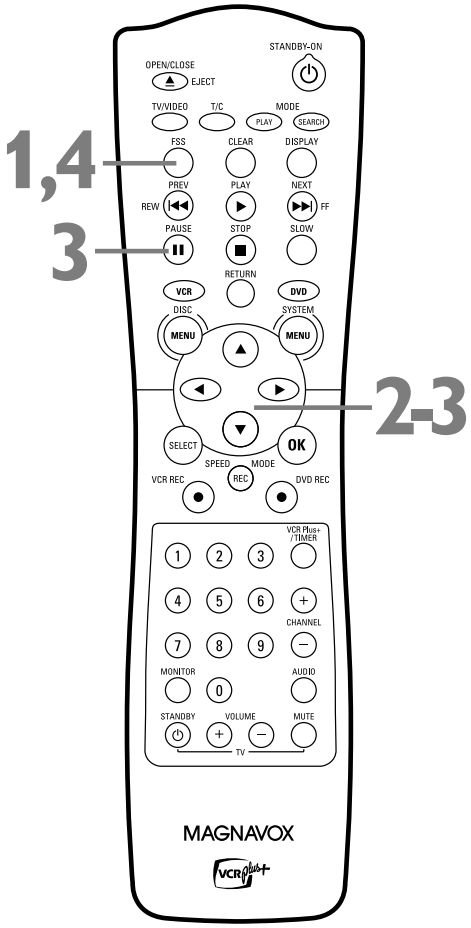
Helpful Hints

- *For information on the Index Picture Screen, see page 34.*
- *Make edits compatible appears when the current DVD+RW is not compatible with other DVD Players because you have added Chapter Markers or made Chapters invisible. See page 54.*
- *If a DVD+R was recorded on a different Recorder, the settings may not be accessible.*
- *A disc name may contain a maximum of 64 characters.*

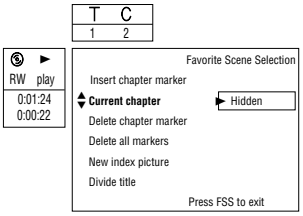
E9490UD_EN.qx3 04.8.3 11:55 AM Page 54

Although all editing changes may not be accessible when you play the Disc on other DVD Players, these editing changes are available for the Recorder.

- Before you begin, make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.



1 **During DVD+RW or DVD+R play, press FSS.** The Favorite Scene Selection menu will appear as play continues. The current Title and Chapter numbers will appear at the top of the screen.



DVD+RW example

2 **Press ▲ or ▼ to select Insert chapter marker, Current chapter, Delete chapter marker, Delete all markers, New index picture, or Divide title (DVD+RW only), then proceed as described in step 3.**

3

- **If you select Insert chapter marker, press OK.** "Inserting chapter marker" will appear. This places a Chapter marker at the point you select.

- **If you select Current chapter, press ►** (or SELECT) **repeatedly to select Visible or Hidden.** Initially all Chapters are visible, but you can determine which chapters you want to view. For example, if you do not want to watch certain scenes (for example, commercials), insert Chapter markers at the beginning and end of the scene, then hide that segment by choosing Hidden. The picture may freeze briefly between scenes during playback, but you will not see the hidden content.

- **If you select Delete chapter marker, press OK.** "Deleting marker ..." will appear. This deletes the Chapter marker at the beginning of the current Chapter. (This option is not always available.)

- **If you select Delete all markers, press OK.** "This will delete all markers in this title. Press OK to confirm" will appear. **Press OK again.** (If you decide not to delete all markers, press ◄.)
(This option is not always available.)

- **If you select New Index Picture, press PAUSE ❚❚ to choose a frame of picture during play.** This frame will become the miniature picture that will appear in the Index Picture Screen for the current Title.
Press OK. "This will update the index picture Press OK to confirm" will appear. **Press OK again.** (If you decide not to select a new Index Picture, press ◄.) "Updating menu" will appear, then the Index Picture Screen will reappear when the action is complete.

- **If you select Divide title (DVD+RW only), press PAUSE ❚❚ during play to choose the point at which you want to start the new Title. Press OK**. "This will divide this title into two separate titles. Press OK to confirm" will appear. **Press OK again**. (If you decide not to divide the Title, press ◄.) "Dividing title" appears in the menu until the action is complete; the Index Picture Screen will reappear.

4 **Press FSS** to remove the Favorite Scene Selection menu.

Helpful Hints

- *The maximum number of Chapters per Title varies. When you reach the maximum number, "Too many chapters" may appear on the screen. Delete Chapters before making more.*
- *You cannot undo a Title division. The Index Picture Screen will show two Titles instead of one.*
- *Editing changes on DVD+Rs will be accessible only when playing the DVD+R on this Recorder. You cannot edit a DVD+R after it is finalized.*
- *Insert chapter markers during recording by pressing FSS. See page 51.*

E9490UD_EN.qx3 04.8.3 11:55 AM Page 55

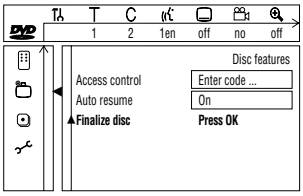
You can record and finalize DVD+Rs one time. After you fill a DVD+R or complete all the recordings you want on a single DVD+R, finalize it. Otherwise, the DVD+R will play only on this Recorder. To play the Disc on other DVD Players, you must finalize it first.
Once you finalize a DVD+R, you cannot record on it anymore or make editing changes. Therefore, make sure the Disc is as you want it before you finalize it.

- Before you begin, make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.

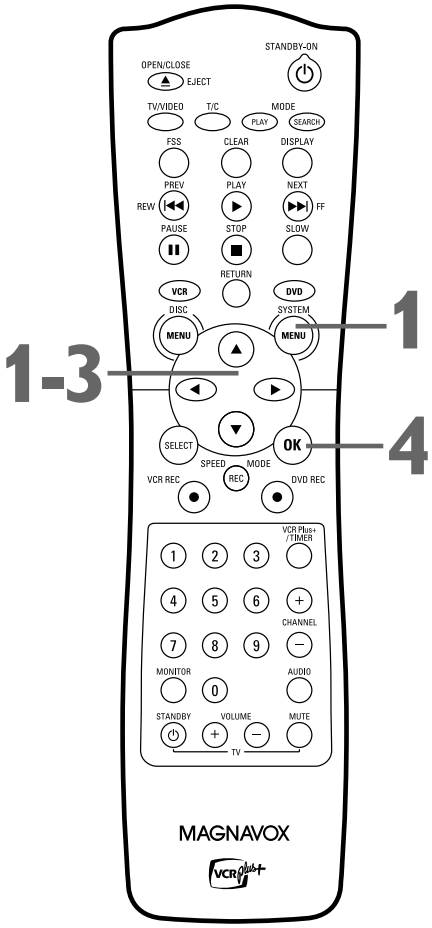
1 **Press SYSTEM MENU. Press ◄ to select** in the top left corner of the menu bar at the top of the TV screen.

2 **Press ▼ repeatedly to select in the second screen, then press ►.**

3 **Press ▼ repeatedly to select Finalize disc.** Finalize disc appears in the menu only when an unfinalized DVD+R is in the Recorder.



4 **Press OK.** "Finalizing" will appear in the menu. The process may take a few minutes. **When finalization is complete, the Index picture screen will reappear.**
You cannot unfinalize a DVD+R, and you cannot record or edit the DVD+R after you finalize it.
A DVD+R will play on other DVD Players only after the Disc is finalized.



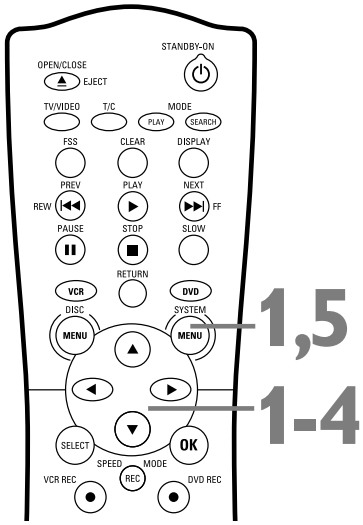
E9490UD_EN.qx3 04.8.3 11:55 AM Page 56

56 Auto Resume, Playback Control

Auto Resume

Auto resume affects the last 20 prerecorded DVDs and Video CDs you played. When Auto resume is On, play resumes where you last stopped the Disc. If Auto resume is Off, play starts at the beginning of the Disc.

- Before you begin, make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.

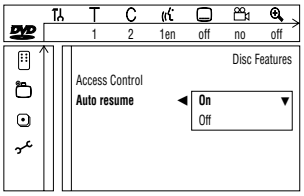


1 **Press SYSTEM MENU. Press ◄ to select** in the top left corner of the menu bar at the top of the TV screen.

2 **Press ▼ repeatedly to select in the second screen, then press ►.**

3 **Press ▼ to select Auto resume, then press ►.**

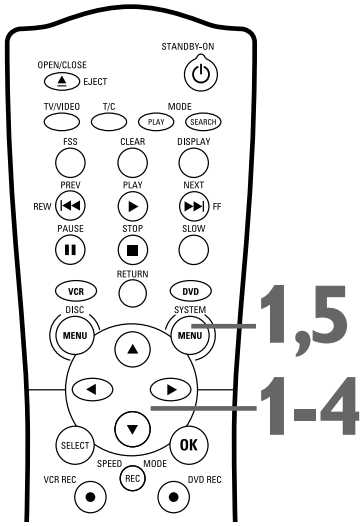
4 **Press ▲ or ▼ to select On or Off, then press OK.**



5 **Press SYSTEM MENU to remove the menus.**

Playback Control

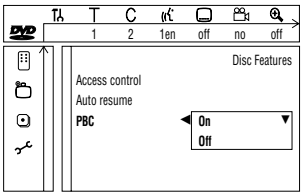
Some Video CDs have interactive menus that customize play. If the Video CD has Playback Control (PBC), follow these steps to turn it on or off.



1 **Press SYSTEM MENU. Press ◄ to select** in the top left corner of the Menu Bar at the top of the TV screen.

2 **Press ▼ repeatedly to select in the second screen, then press ►.**

3 **Press ▼ repeatedly to select PBC, then press ►.** It appears in the menu only when a Video CD with Playback Control is in the Recorder.



4 **Press ▲ or ▼ to select On or Off, then press OK.**

5 **Press SYSTEM MENU to remove the menus.**

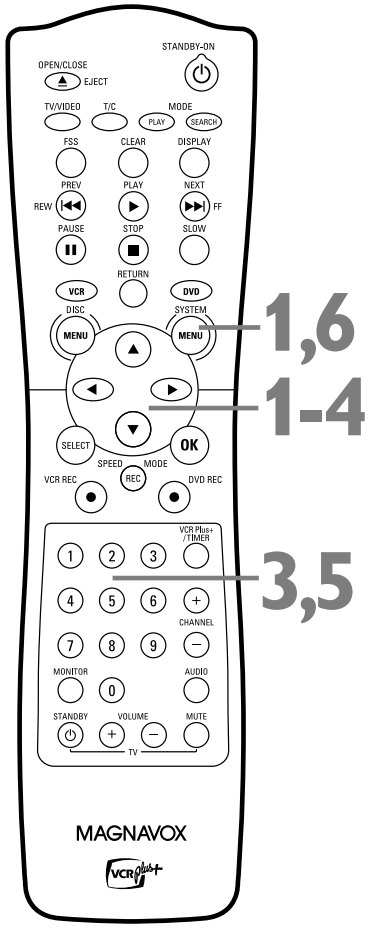
Helpful Hints

- *If the resume symbol appears when you start play, press PLAY ►. This lets you resume play from the last played point, even if Auto resume is Off. See page 21.*
- *The display panel will be blank during play of a Video CD with PBC On.*

E9490UD_EN.qx3 04.8.3 11:55 AM Page 57

Access Control limits viewing of Discs that exceed the limits you set. This feature will not limit viewing if the Disc manufacturer did not code the Disc. Magnavox cannot guarantee the availability of Access Control with all Discs, and therefore denies any liability associated with unintended watching of Discs. Make sure your Discs play according to your Access Control settings before you allow children access to the Recorder.

- Before you begin, make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.

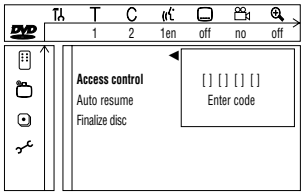


Change Code

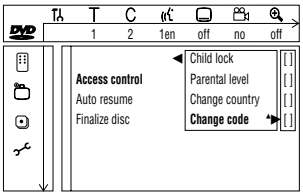
1 **Press SYSTEM MENU. Press ◄ to select** in the top left corner of the menu bar at the top of the TV screen.

2 **Press ▼ repeatedly to select on the second screen, then press ►.** Access control will be selected.

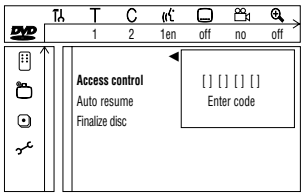
3 **Press ► again, then press the Number buttons to enter your old four-digit code.** When doing this the first time, enter any four numbers you prefer. You will have to enter the same code, exactly, twice. This will set your code for the first time.



4 **Press ▼ repeatedly to select Change code, then press ►.**



5 **Press four Number buttons to enter the new four-digit code. Then, enter it again - exactly - to confirm it.** The Access control menu will reappear.



6 **Press SYSTEM MENU to remove the menu.**

Helpful Hints

- *The code may not go into effect until you activate Child Lock. (You may have to keep confirming the code.) See page 58 to activate Child Lock.*
- *Finalize disc will appear in this menu only when a non-finalized DVD+R is in the Recorder. See page 55.*

E9490UD_EN.qx3 04.8.3 11:55 AM Page 58

58 Access Control (cont'd)

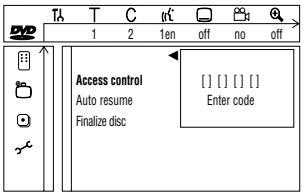
Child Lock

- Before you begin, make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.

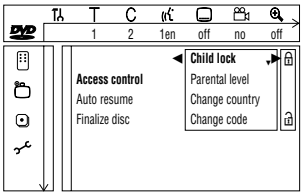
1 **Press SYSTEM MENU. Press ◄ to select** in the top left corner of the menu bar at the top of the TV screen.

2 **Press ▼ repeatedly to select in the second screen, then press ►.** Access control will be highlighted.

3 **Press ► again, then press the Number buttons to enter your four-digit code.** *See page 57.*

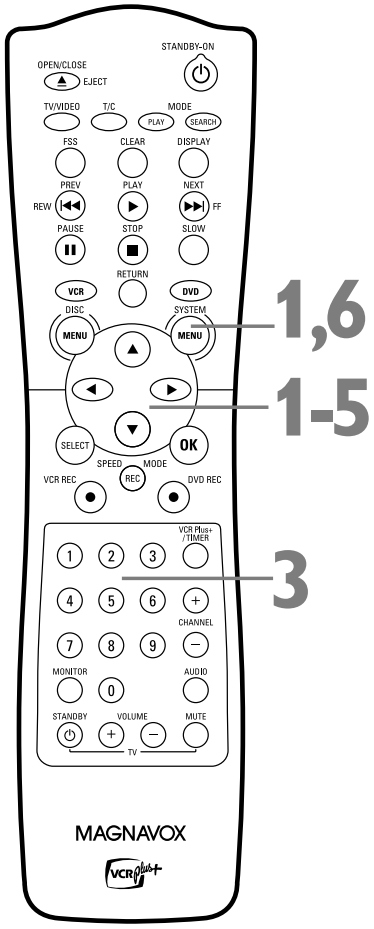


4 Child lock will be highlighted. **Press ►.**



5 **Press ▲ or ▼ to select Locked or Unlocked , then press OK.** If you chose Locked, unauthorized or Locked Discs will not play unless you enter your four-digit code.

6 **Press SYSTEM MENU to remove the menus.**



Helpful Hint

- *Finalize disc will appear in this menu only when a non-finalized DVD+R is in the Recorder. See page 55.*

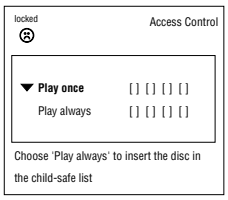
E9490UD_EN.qx3 04.8.3 11:55 AM Page 59

Locking or Unlocking Specific Discs

Not all Discs are rated or coded by Parental levels. You may choose to specifically lock or unlock a Disc by choosing Play once or Play always. This way, you can disable viewing regardless of the rating of a DVD. You will need to know your four-digit code in order to view the Disc.

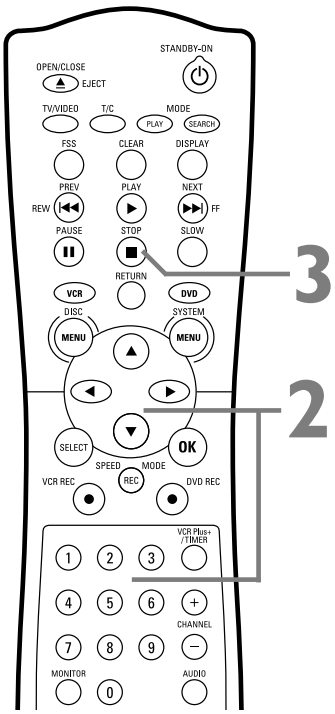
- Before you begin, make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.

1 **Insert a Disc.** The Access Control message will appear on the TV screen. (Child Lock should be Locked. *See page 58.*)



2 **Press ▲ or ▼ to select Play once or Play always. Then, press the Number buttons to enter your four-digit code.**
If you select Play Once, the Disc will play one time. If you stop playback, open the Disc tray, or turn off the Recorder's power, the Access Control screen will reappear when you try to play the Disc again.
If you select Play Always, the Disc will play even if you turn off the Recorder, open the disc tray, or set Child Lock to (Locked). *See page 58.*

3 **If you later decide to lock the Disc so it will not play always:** When you insert the Disc, safe appears on the TV screen. **Press STOP ■ while safe is on the TV screen.** Locked will appear. If the Disc continues playing, press STOP ■ again to stop playback. You may need to turn off the Recorder or remove the Disc before the Disc is completely Locked. The next time you turn on the Recorder or try to play the Disc, the Access Control screen will appear. The Disc will not play unless you enter the four-digit code.



1 Insert a Disc.

Helpful Hints

- *The Access Control screen will appear when you try to play a Locked Disc. If you do not know your code, press STOP ■. Then, select Access Control as described in steps 1-3 on page 58. When you are asked to enter the code, press STOP ■ four times (no indication will appear in the menu). Press SYSTEM MENU, then press PLAY ▶ to start playback. This restores all the Access Control settings to their original factory settings. All Discs can play, and you should set a new code.*
- *Two-sided DVDs may have a different ID for each side. To unlock the entire Disc, unlock each side.*
- *Multi-volume Disc sets may have a different ID for each volume. Unlock each volume.*

E9490UD_EN.qx3 04.8.3 11:55 AM Page 60

60 Access Control (cont'd)

Parental Level

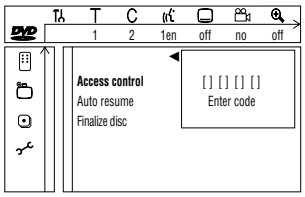
Follow the steps below to set the Parental Level at which you want Discs to play.

- Before you begin, make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.

1 **Press SYSTEM MENU. Press ◄ to select** in the top left corner of the menu bar at the top of the TV screen.

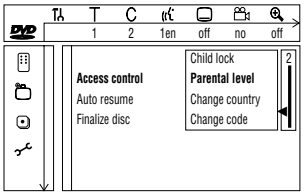
2 **Press ▼ repeatedly to select in the second screen, then press ►.** Access control will be highlighted.

3 **Press ► again, then press the Number buttons to enter your four-digit code.**

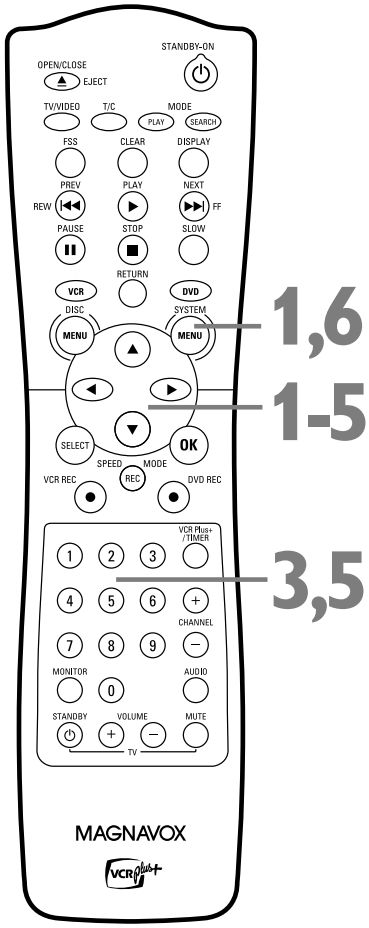


4 **Press ▼ to select Parental level, then press ►.**

5 **Press ▲ or ▼ or the Number buttons to select a rating, then press OK.**
Select "0" (– –) to deactivate Parental level. All Discs will play. Choose a rating between 1-8, and Discs with the same rating or lower will play. Higher rated Discs will not play. Enter the four-digit code to play the Disc.



6 **Press SYSTEM MENU to remove the menus.**



Helpful Hints

- *The rating numbers compare to standard U.S. movie ratings as follows:*
  7 - NC-17
  6 - R
  4 - PG-13
  3 - PG
  1 - G
- *Finalize disc will appear in this menu only when a non-finalized DVD+R is in the Recorder. See page 55.*

E9490UD_EN.qx3 04.8.3 11:55 AM Page 61

Change Country

If a Disc has Parental Level coding, the codings are applicable only for the country specified on the Disc. The Disc manufacturer sets these codings. For example, a Disc may be coded at Level 3 for the United States. So, for some Discs, you may need to choose the Country for which the Disc is coded in order for the Disc to play at the Parental Level you select. *See page 60.* Also refer to your Disc case for more information.

- Before you begin, make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.

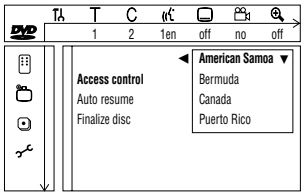
1 **Press SYSTEM MENU. Press ◄ to select** in the top left corner of the menu bar at the top of the TV screen.

2 **Press ▼ repeatedly to select in the second screen, then press ►.** Access control will be highlighted.

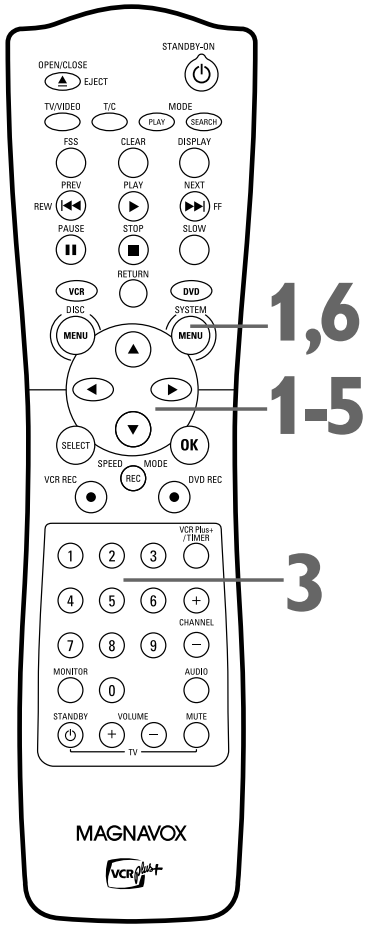
3 **Press ► again, then press the Number buttons to enter your four-digit code.** Child lock will be highlighted.

4 **Press ▼repeatedly to select Change country. Press ►.**

5 **Press ▲ or ▼to select the country for which the Disc is coded, then press OK.**



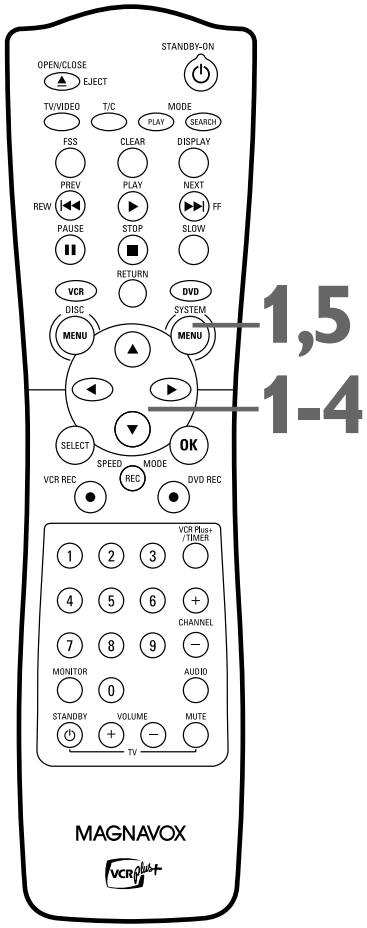
6 **Press SYSTEM MENU to remove the menus.**



E9490UD_EN.qx3 04.8.3 11:55 AM Page 62

62 DVD Recorder Features Menu

● Before you begin, make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.

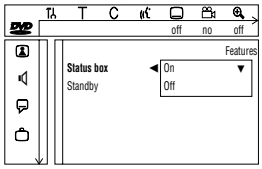


1 **Press SYSTEM MENU. Press ◄ to select** in the top left corner of the Menu Bar at the top of the TV screen.

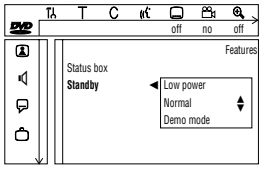
2 **Press ▼ repeatedly to select , then press ►.**

3 **Press ▲ or ▼ to select a feature. Press ► and follow step 4 according to your choice.**

4 ● **If you selected Status box, press ▲ or ▼ to choose On or Off, then press OK.** The status box briefly displays the Disc type and status of the Recorder. Select On if you want to see the Status boxes. Choose Off if you do not want to see the Status boxes. *See page 33.*



● **If you selected Standby, press ▲ or ▼ to choose Low power, Normal, or Demo mode, then press OK.**
Choose Low power if you do not want the clock to appear on the display panel when the power is off. Choose Normal if you want the time to appear on the display panel when the power is off.Choose Demo mode if you want the Recorder's features to scroll across the display panel when the power is off.



5 **Press SYSTEM MENU repeatedly to remove the menus.**

E9490UD_EN.qx3 04.8.3 11:55 AM Page 63

- Before you begin, make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.

1 **Press SYSTEM MENU. Press ◄ to select** in the top left corner of the menu bar at the top of the TV screen.

2 **Press ▼ to select , then press ►.**

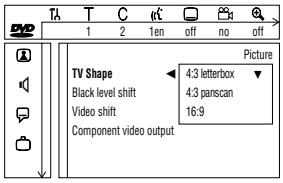
3 **Press ▲ or ▼ to select TV Shape, Black level shift, Video shift, or Component video output. Then, press ► and follow step 4 according to your choice.**

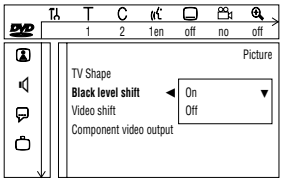
4 ● **If you selected TV Shape, press ▲ or ▼ to select 4:3 letterbox, 4:3 panscan, or 16:9, then press OK.**
Select 4:3 letterbox if you want to see the widened picture with black bars at the top and bottom of the screen. This looks like the picture you see when watching movies in a theater. This setting is possible only if the DVD is recorded in letterbox or widescreen format.
Select 4:3 panscan if you want the picture to be trimmed or formatted to fit your TV screen. This setting is possible only if the DVD is recorded in the regular format.
Select 16:9 if you connected the Recorder to a widescreen TV.

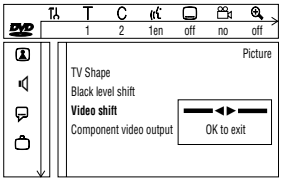
● **If you selected Black level shift, press ▲ or ▼ to select On or Off, then press OK.** Set Black level shift to On to improve the color contrast and brighten the picture of NTSC Discs.

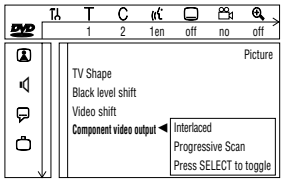
● **If you selected Video shift, press ◄ or ► to center the picture horizontally** on your TV screen - or "shift" the video. **When you are satisfied with the position of the picture, press OK.**

● **If you selected Component video output, press SELECT repeatedly to choose Interlaced or Progressive Scan.** Select Progressive Scan only if you used the COMPONENT VIDEO OUT (Y PB PR) jacks on the Recorder to connect it to a TV that has Progressive Scan. *See page 12.* Otherwise, choose Interlaced.
If you choose Progressive Scan, PRO will appear on the display panel.
Do not set Component video output to Progressive Scan unless you have a component video connection to a TV. Otherwise, you will lose the DVD picture from the Recorder to the TV. You will have no picture at the TV.

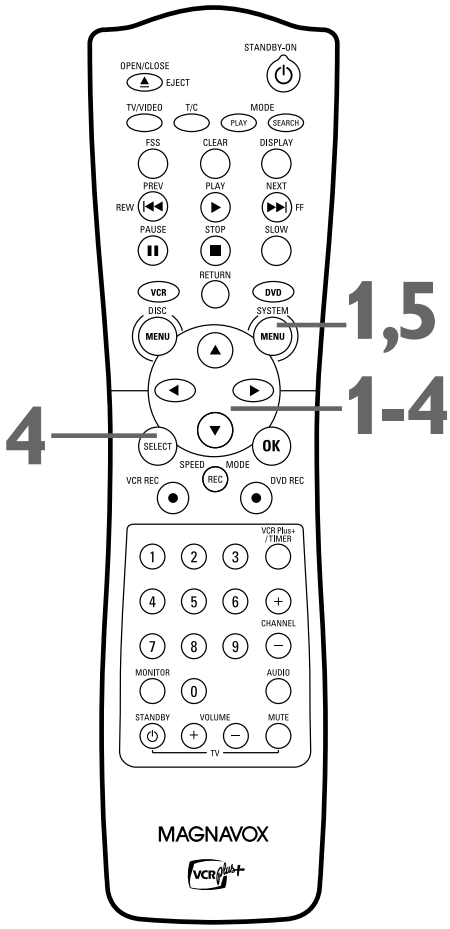








5 **Press SYSTEM MENU to remove the menus.**



Helpful Hints

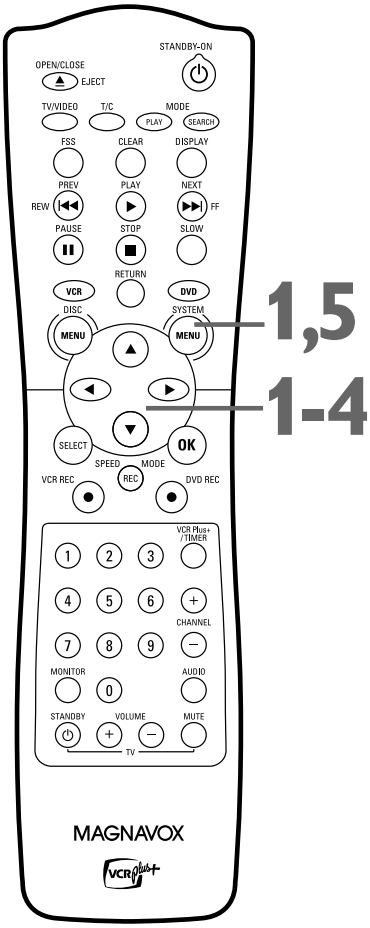
- *The picture format you select for TV Shape must be on the DVD. If not, the settings for TV Shape will not affect the picture.*
- *Some widescreen TVs may show only part of the Recorder's menu. Adjust the screen mode on your TV. See your TV owner's manual for details.*

E9490UD_EN.qx3 04.8.3 11:55 AM Page 64

64 Digital Output

After connecting the Recorder to your TV and other equipment, you may need to change the Recorder's Digital Output setting. Look to see which Recorder audio jacks you connected to your other equipment, then set Digital Output accordingly. The information in step 4 will help you decide. Adjust Digital Output only if you used the Recorder's COAXIAL DIGITAL AUDIO OUT jack. *See page 16.* (If you used the white/red AUDIO OUT L/R jacks, set Digital Output to Off. *See page 65* to adjust the sound at Analog Output.)

- Before you begin, make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.



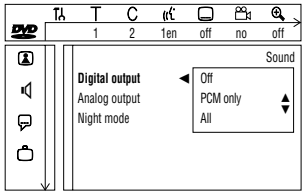
1 **Press SYSTEM MENU. Press ◄ to select** in the top left corner of the menu bar at the top of the TV screen.

2 **Press ▼ repeatedly to select , then press ►.**

3 Digital output will be selected. **Press ►.**

4 **Press ▲ or ▼ to select Off, PCM only, or All, then press OK.**

- Select Off if you did not use the COAXIAL DIGITAL AUDIO OUT jack.
- Select PCM only if you used the Recorder's COAXIAL DIGITAL AUDIO OUT jack for connections, but your Stereo does not include a built-in digital multi-channel decoder. PCM represents Pulse Code Modulation.
- Select All if you connected the Recorder's COAXIAL DIGITAL AUDIO OUT jack to a Stereo that has a built-in multi-channel decoder. *See page 16.*



5 **Press SYSTEM MENU to remove the menus.**

E9490UD_EN.qx3 04.8.3 11:55 AM Page 65

If you connected the Recorder's white/red AUDIO OUT L/R jacks to a Stereo or TV as shown on pages 12-15, choose a setting for Analog Output.
Check your Stereo or TV and see if it is compatible with Dolby Surround. Then follow the steps below to choose the Analog Output setting that is most compatible with your Stereo or TV.

- Before you begin, make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.

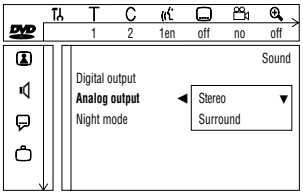
1 **Press SYSTEM MENU. Press ◄ to select** in the top left corner of the menu bar at the top of the TV screen.

2 **Press ▼ repeatedly to select , then press ►.**

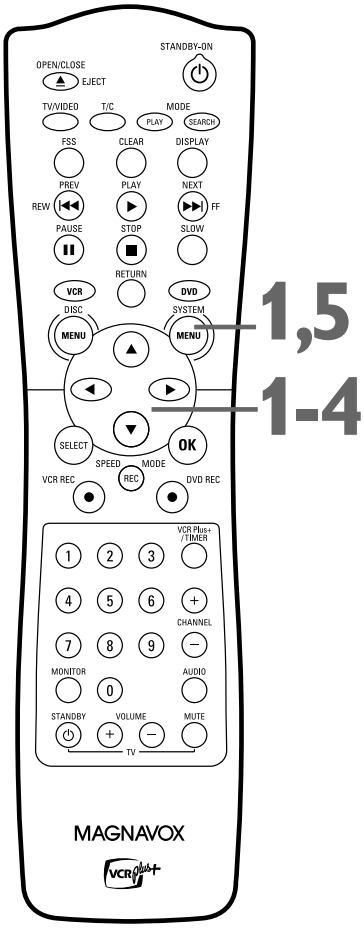
3 **Press ▼ to select Analog output, then press ►.**

4 **Press ▲ or ▼ to select Stereo or Surround, then press OK.**

- Select Stereo to hear sound from the left and right audio channels if the Recorder is connected to a Stereo TV.
- Select Surround if your audio equipment is compatible with Dolby Surround. If it is, usually a Dolby Pro Logic logo will appear on the equipment.



5 **Press SYSTEM MENU to remove the menus.**



Helpful Hint

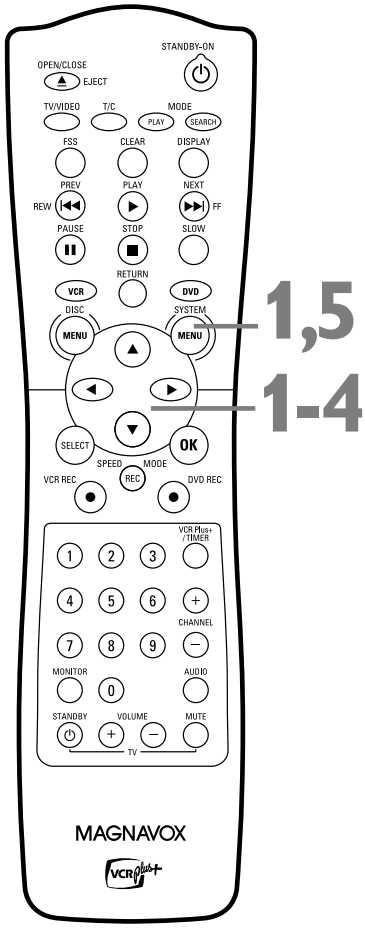
- *You also can set analog sound in the Menu Bar. See page 39.*

E9490UD_EN.qx3 04.8.3 11:55 AM Page 66

66 Language Settings

In the Language menu, select a different language for the Audio soundtrack or Subtitles of a DVD. Or, change the language of the Recorder's System Menu. You also can determine whether you receive TV channels in Stereo or a Second Audio Program language by following these steps.

- Before you begin, make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.



1 **Press SYSTEM MENU. Press ◄ to select** in the top left corner of the menu bar at the top of the TV screen.

2 **Press ▼ repeatedly to select , then press ►.**

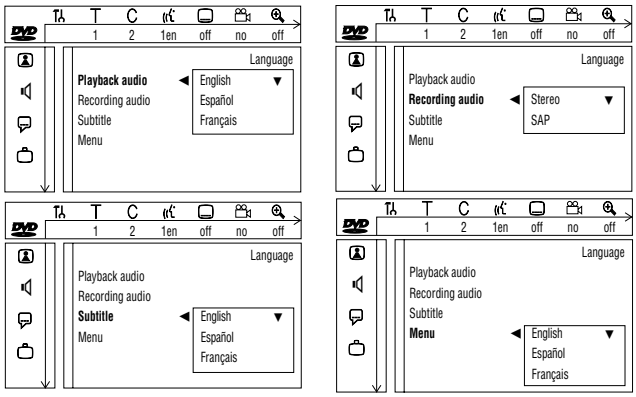
3 **Press ▲ or ▼ to select Playback audio, Recording audio, Subtitle, or Menu, then press ► and proceed as detailed in step 4.**

4 ● **If you selected Playback audio, press ▲ or ▼ to select the language in which you want to play the Disc, then press OK.** The changes will be effective only if the language is available on the Disc. Some DVDs allow you to change languages in the Disc Menu only.

● **If you selected Recording audio, press ▲ or ▼ to select Stereo or SAP, then press OK.** This setting applies to Disc and videotape recording. This determines whether you receive the TV broadcast in Stereo or SAP when you watch TV through the Recorder in VCR mode or DVD monitor mode.
Some TV programs broadcast in stereo or in a second audio program (SAP). Usually, second audio means the program has a second language available. For example, the program might be available in English and Spanish, with Spanish being the SAP (second audio program) option. Your selection will only be active if the program is broadcast in stereo or second audio. SAP will appear on the display panel when the current TV channel has SAP available.
When you play the recording, you can play only in the audio you recorded. For example, if you recorded in SAP, you can play the recording only in SAP.

● **If you selected Subtitle, press ▲ or ▼ to choose the language in which you want the Subtitles, then press OK.** The subtitles will be in that language only if available on the Disc.

● **If you selected Menu, press ▲ or ▼ to choose English, Espanol (Spanish), or Français (French), then press OK.** This adjusts the language of the Recorder's System Menu and the VCR's displays and messages, which are available only in these three languages.



5 **Press SYSTEM MENU to remove the menus.**

Helpful Hint

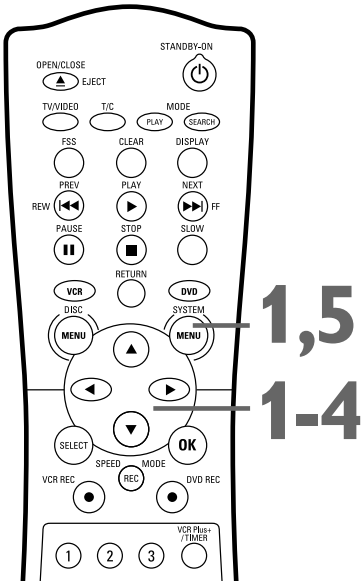
- *If Recording audio is set to SAP and you record a TV program that is available only in Stereo, the Recorder will record the program in Stereo.*

E9490UD_EN.qx3 04.8.3 11:55 AM Page 67

Night Mode

Turn on Night Mode to improve the sound during low volume playback.

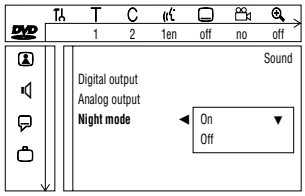
- Before you begin, make sure the Recorder is in DVD mode. Press DVD so the DVD light appears on the front of the Recorder.



1 **Press SYSTEM MENU. Press ◄ to select** in the top left corner of the menu bar at the top of the TV screen.

2 **Press ▼ repeatedly to select , then press ►.**

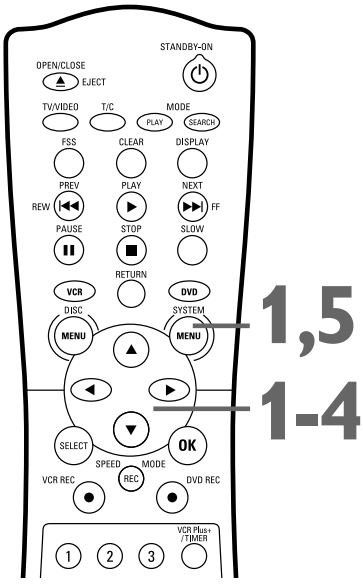
3 **Press ▼ repeatedly to select Night mode, then press ►.**



4 **Press ▲ or ▼ to select On or Off, then press OK.**

5 **Press SYSTEM MENU to remove the menus.**

Remote Control Used

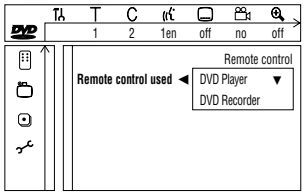


1 **Press SYSTEM MENU. Press ◄ to select** in the top left corner of the menu bar at the top of the TV screen.

2 **Press ▼ repeatedly to select in the second menu screen, then press ►.**

3 Remote control used will be highlighted. **Press ►.**

4 **Press ▲ or ▼ to select DVD Player or DVD Recorder, then press OK.** The factory setting is DVD Recorder. By selecting DVD Recorder, you choose to operate the Recorder with its supplied remote control (as shown at right and throughout this book). If you have a Magnavox DVD Player and want to use its remote for the Recorder, select DVD Player. You might not access all the Recorder's features unless you use the Recorder's remote.



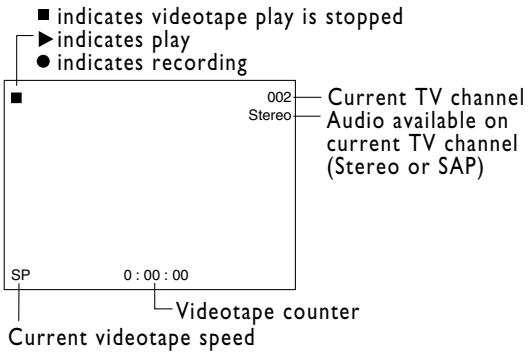
5 **Press SYSTEM MENU to remove the menus.**

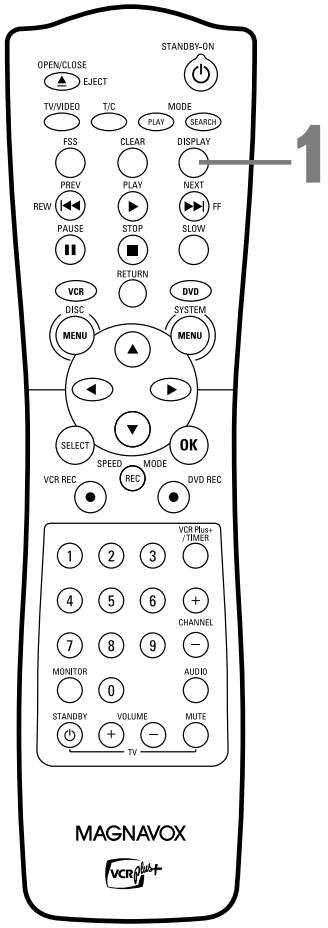
68 VCR Status Displays

You may access VCR status displays that show the current videotape information.

- Before you begin, make sure the Recorder is in VCR mode. Press VCR so the VCR light appears on the front of the Recorder.

1 **Press DISPLAY** to access or remove the VCR status display.





Helpful Hint

- *When you turn on the Recorder in VCR mode, the display appears for five seconds.*
- *You cannot access a videotape status display when viewing a still picture, during slow motion, or during forward and reverse searching.*
- *Channel numbers appear on the TV screen only for a few seconds each time you change TV channels in VCR mode when the status display is off.*

E9490UD_EN.qx3 04.8.3 11:55 AM Page 69

Read and follow the steps below to record a current television program onto a videotape.

- Before you begin, make sure the Recorder is in VCR mode. Press VCR so the VCR light appears on the front of the Recorder.

1 **Turn on the TV and set it to channel 3 or 4 or the Video In channel.** If you connected the Recorder to the TV using the supplied audio and video cables, select your TV's Video In channel. *Details are on page 14.*
If you connected the Recorder to the TV using the supplied RF coaxial cable, choose channel 3 (or 4) at the TV. *Details are on pages 10-11.*
You must use composite video or the RF coaxial cable connection for VCR features.

2 **Insert a videotape with its record tab intact into the cassette compartment of the Recorder.** If videotape playback begins, press STOP ■.

3 **Press REC SPEED/MODE until the desired tape speed (SP or SLP) appears briefly on the TV screen.** *Details about tape speed are on page 79.*

4 **Press CHANNEL +/- or the Number buttons to select the TV channel to record.**

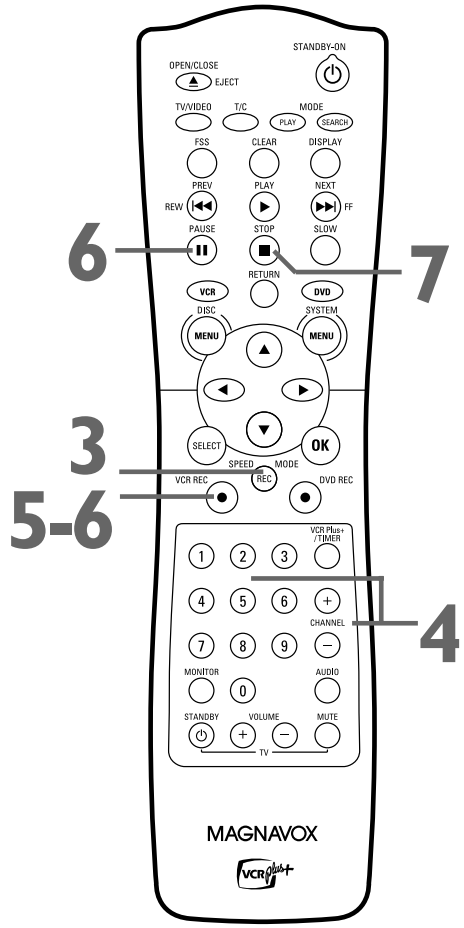
5 **Press VCR REC ● to start recording.** REC will appear on the VCR display panel.

6 **To pause the recording, press PAUSE ❚❚ once.** REC will flash in the VCR display panel. **To resume recording, press VCR REC ● or press PAUSE ❚❚ again.** REC will reappear.

7 **To stop recording, press STOP ■.**

1 Turn on the TV.

2 Insert a videotape in the Recorder.

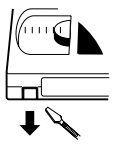


Recording Prevention

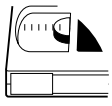
Video cassettes have record tabs to ensure that recordings are not accidentally erased.

1 **To prevent recording, break off the tab with a screwdriver.**

2 **To allow recording, cover the hole with clear tape.**



Remove the tab to prevent recording.



Cover the hole to allow recording.

Helpful Hints

- *The VCR will record in a preset volume.*
- *Pause will switch to Stop after five minutes to protect the VCR and the videotape from damage. When a recording is paused, review the pause time remaining with the ■ marks on the TV screen. Each ■ mark equals one minute remaining. During the last minute of paused recording, the ■ mark will flash.*

E9490UD_EN.qx3 04.8.3 11:55 AM Page 70

70 Record One Channel/Watch Another (VCR)

1 **Press VCR REC ● to record the current TV channel in VCR mode.** *Details are on page 69.*

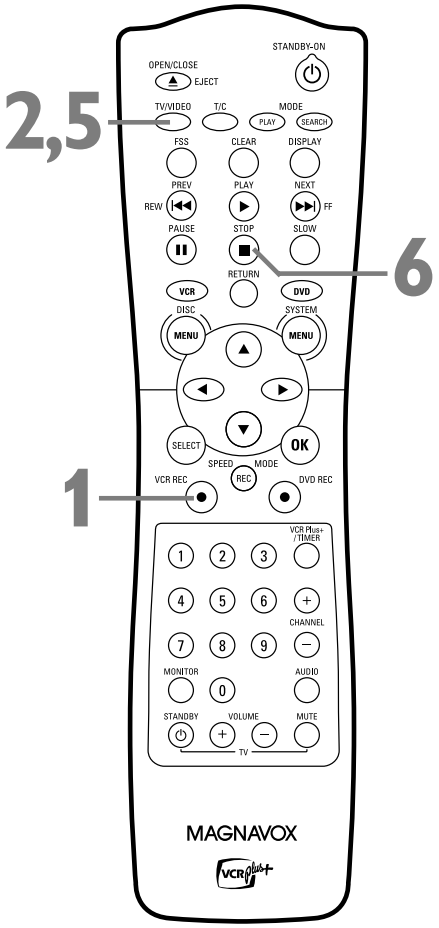
2 **Press TV/VIDEO once to put the Recorder in TV position.** TV will appear on the Recorder's display.

3 **Use the TV remote control to select the channel you want to watch at the TV.**

4 **To return to the channel being recorded, use the TV remote control to return to channel 03 or 04 at the TV.** Or, if you connected the Recorder to the TV using audio and video cables, return to the TV's correct Video In channel. *Details are on page 14.*

5 **Press TV/VIDEO on the Recorder's remote control to put the Recorder in VIDEO position.** VIDEO will appear briefly on the Recorder's display panel. The channel being recorded will appear on the TV screen.

6 **Press STOP ■ to stop the recording.**



3 Select the channel you want to watch at the TV.

4 Reselect channel 03, 04, or Video In at the TV.

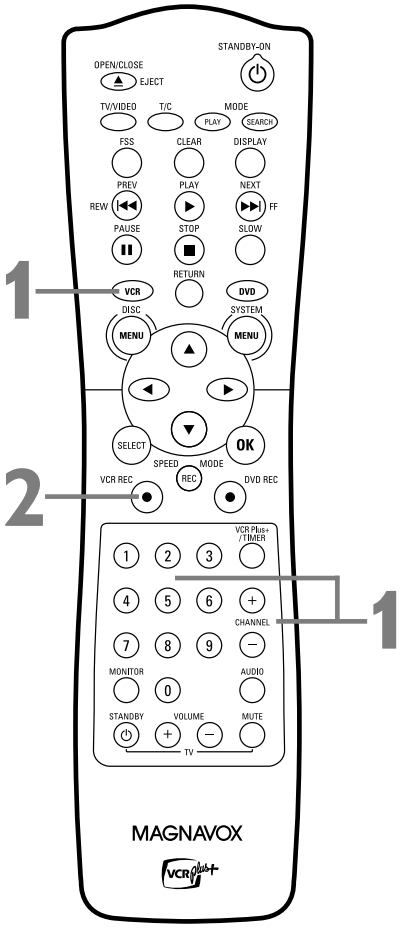
E9490UD_EN.qx3 04.8.3 11:55 AM Page 71

One-Touch Recording (OTR) lets you set a timed recording 30 minutes to eight hours long of the current TV channel. Before you begin:

- Place the Recorder in VCR mode. Press VCR so the VCR light appears on the front of the Recorder.
- Select a recording speed (SP, SLP) with the REC SPEED/MODE button.
- Put a videotape in the cassette compartment. Make sure the tape's record tab is intact and the tape is long enough to record the program(s).

1 **Press VCR, then press CHANNEL +/- or the Number buttons to select the channel you want to record.**

2 **Press VCR REC ● repeatedly until the desired recording length (30 minutes to eight hours) appears on the TV screen.** Recording will begin. REC will appear on the VCR display panel.



Stopping an OTR

To stop an OTR before recording is finished, press STOP ■ on the remote control or STOP ■ / EJECT ▲ (VCR) on the front of the Recorder.
To cancel the OTR but continue recording, press VCR REC ● repeatedly until only ● appears in the upper left corner of the TV screen.

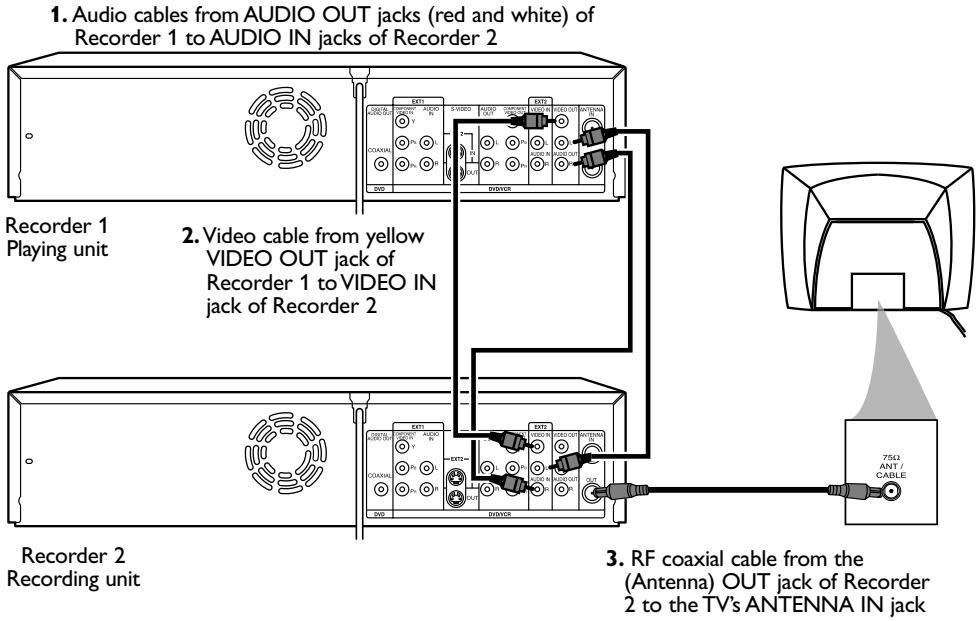
Helpful Hints

- *The remaining recording time will appear on the VCR display panel during an OTR. Press DISPLAY to see it on the TV screen.*
- *To change the recording length while an OTR is in progress, press VCR REC ● repeatedly.*
- *You cannot pause an OTR.*
- *If the end of the tape is reached during an OTR, the VCR will stop recording and eject the tape.*

E9490UD_EN.qx3 04.8.3 11:55 AM Page 72

72 Rerecording (Tape Duplication)

These instructions show you how to copy videotapes. The illustration uses two Recorders. Other VCRs or Camcorders may operate differently.


1. Audio cables from AUDIO OUT jacks (red and white) of Recorder 1 to AUDIO IN jacks of Recorder 2
Recorder 1
Playing unit
2. Video cable from yellow VIDEO OUT jack of Recorder 1 to VIDEO IN jack of Recorder 2
75Ω
ANT / CABLE
Recorder 2
Recording unit
3. RF coaxial cable from the (Antenna) OUT jack of Recorder 2 to the TV's ANTENNA IN jack

1 **Make the connections shown above.**

2 Recorder 1 will play your tape. **Put a prerecorded tape into the cassette compartment of Recorder 1.** Press VCR to put the unit in VCR mode if necessary.

3 Recorder 2 will record your tape. **Insert a blank tape in the cassette compartment of Recorder 2.** Press VCR to put the unit in VCR mode if necessary.

4 **Turn on the TV and set it to channel 03.** (To use channel 04 instead, see *page 10*.)

5 **Point the remote control at Recorder 2. Press CHANNEL +/- to select EXT2 or CAM1.** *(See Helpful Hints at right.)*

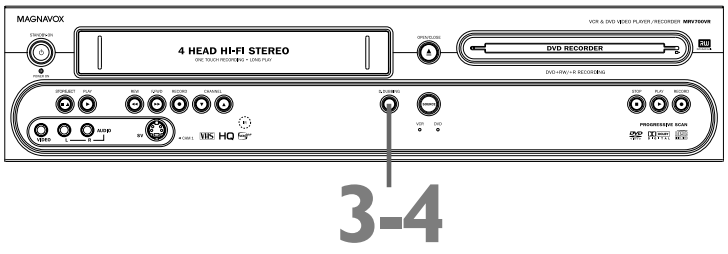
6 **Press REC SPEED/MODE to select SP or SLP as the tape recording speed at Recorder 2.**

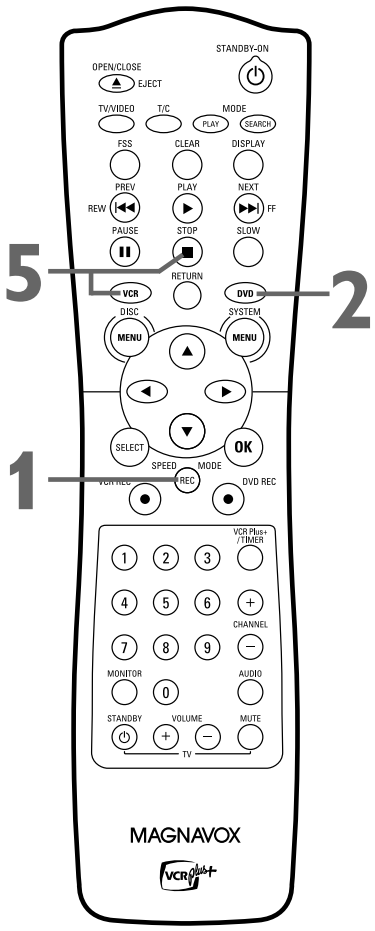
7 **Press RECORD ● (VCR) on the front of Recorder 2 then press PLAY ► (VCR) on the front of Recorder 1.**
To stop recording, press STOP ■ / EJECT ▲ (VCR) on Recorder 1, then press STOP ■ / EJECT ▲ (VCR) on Recorder 2.

Helpful Hints

- *If you use the AUDIO and VIDEO IN jacks on the back of Recorder 2, press CHANNEL +/- to select EXT2 at step 5. EXT2 will appear on the TV screen.*
- *If you use the AUDIO and VIDEO In jacks on the front of Recorder 2, press CHANNEL +/- to select CAM1 at step 5. CAM1 will appear on the TV screen.*
- *Unauthorized recording of copyrighted television programs, video tapes, or other materials may infringe on the rights of copyright owners and violate copyright laws.*
- *If a program has copyright protection, it may not record clearly.*

E9490UD_EN.qx3 04.8.3 11:55 AM Page 73





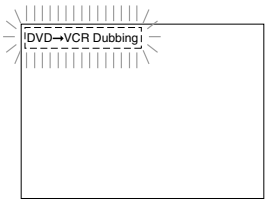
Follow the steps below to copy a DVD to a videotape. **This will be possible only if the DVD is not copy protected.**
Before you begin:

- Put a videotape in the cassette compartment. Make sure the tape's record tab is intact and the tape is long enough to record the DVD. Advance the tape to the point at which you want to start recording.
- Put the DVD you want to copy in the disc tray. Advance it to the point at which you want to start recording, then press STOP ■.
- Press VCR so the VCR light appears on the front of the Recorder.
- Turn on the TV and set it to channel 3, 4, or its Video Input.

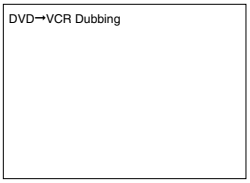
1 **With the Recorder in VCR mode, press REC SPEED/MODE until the desired tape speed (SP or SLP) appears briefly on the screen.** *Details about tape speed are on page 79.*

2 **Press DVD so the DVD light appears on the front of the Recorder.**

3 **Press D.DUBBING on the front of the Recorder.** The unit will be in recording standby mode. REC will flash in the VCR display panel.



4 **Press D.DUBBING on the front of the Recorder again to start recording.** The DVD will start playing automatically, and the tape counter will show recording progress in the VCR display panel. REC will appear on the VCR display panel.



5 **To stop recording press VCR, then press STOP ■.**

Helpful Hint

- *You cannot copy a DVD to a videotape if you are using Progressive Scan.*

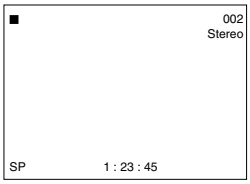
74 Tape Counter

Follow the steps below to reset a videotape's counter to zero at a tape location you want to refer to later.

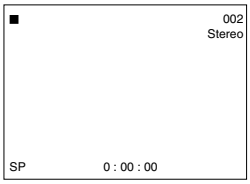
- Before you begin, make sure the Recorder is in VCR mode. Press VCR so the VCR light appears on the front of the Recorder.

1 **Play, fast forward, or rewind a tape to the location that you would like to refer to later. Press STOP ■ to stop the tape.**

2 **Press DISPLAY to see the status display.**

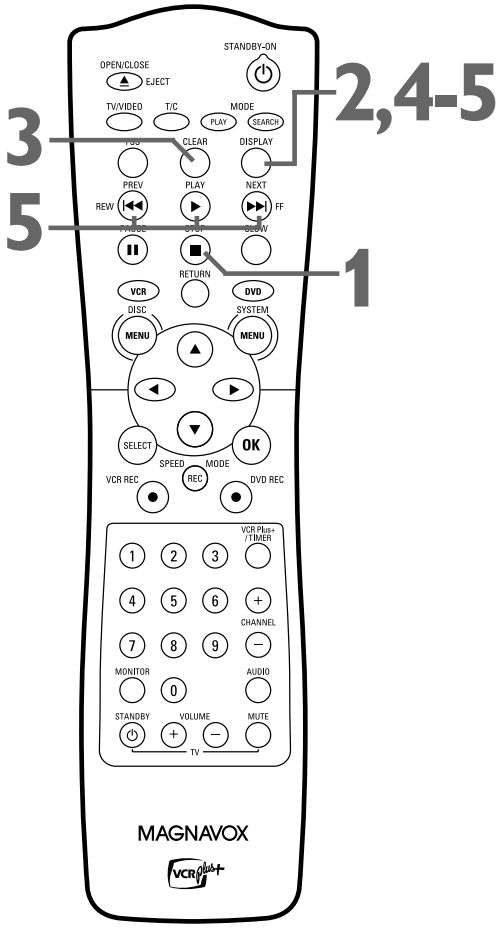


3 **Press CLEAR to reset the counter to zero.**



4 **Press DISPLAY to remove the status display.**

5 **When you later want to return to this point on the tape, press DISPLAY while play is stopped so you can see the counter on the TV screen. Press PREV/REW |◀◀ or NEXT/FF ▶▶|.**
As the tape rewinds or forwards, watch the counter. When it approaches or reaches zero, **press PLAY ▶ to play the tape.**



Helpful Hints

- *You may only set the counter to zero at one location at a time. Setting the counter to zero at a second location will erase the previous zero setting.*
- *If you remove the tape, the counter will reset to zero at the point at which you last stopped playback whenever you reinsert the tape.*

E9490UD_EN.qx3 04.8.3 11:55 AM Page 75

Time Search

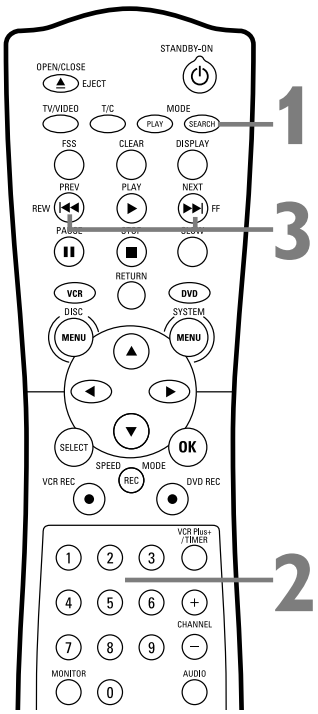
Follow the steps below to search forward or backward on a tape a specific length of time. There must be a tape in the cassette compartment.

- Before you begin, make sure the Recorder is in VCR mode. Press VCR so the VCR light appears on the front of the Recorder.

1 **Press SEARCH MODE until the TIME SEARCH display appears on the TV screen.**

2 **Within 30 seconds, enter the desired length of time using the Number buttons.** For example, enter 0, 0, 3 for 3 minutes. You can set a Time Search for up to 9 hours and 59 minutes (9:59).

3 **Within 30 seconds, press PREV/REW ⏮ (for a reverse search) or NEXT/FF ⏭ (for a forward search).** The VCR begins rewinding or fast forwarding the tape. When the tape finishes rewinding or fast forwarding the time you specified, playback will begin.
The time will count down beneath TIME SEARCH during the search. If the beginning or end of the tape is reached before the search is complete, the search will stop.



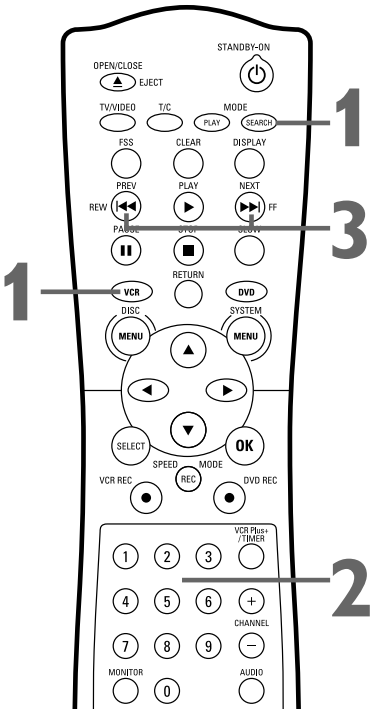
Index Search

An Index Mark is made automatically at the beginning of each recording. Essentially, an Index Mark is a "bookmark." Find the start of a recording by following these steps.

1 **Press VCR, then press SEARCH MODE until the INDEX SEARCH display appears on the TV screen.**

2 **Within 30 seconds, enter the number of programs you want to skip using the Number buttons.** For a single digit number, press 0 first. For example, enter 0, 3 for the third Index Mark. The number you enter appears beneath INDEX SEARCH. Include the current program in your number.

3 **Within 30 seconds, press PREV/REW ⏮ (for a reverse search) or NEXT/FF ⏭ (for a forward search).** When the tape finishes rewinding or forwarding, playback will start. The program numbers will count down beneath INDEX SEARCH during the search.
If the beginning or end of the tape is reached before the search is complete, the search will stop.
Recordings should be at least one minute long in SP speed, two minutes in LP, and three minutes in SLP. Otherwise, the Index Mark will not be available. *Details on tape recording speeds are on page 79.*



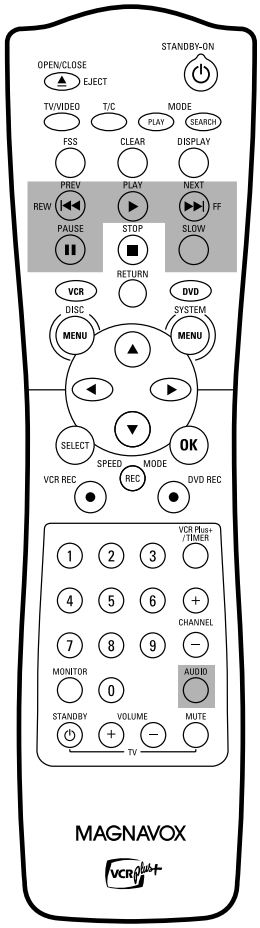
Helpful Hints

- *Time Search and Index Search are not available during recording.*
- *To cancel a search, press STOP ■.*
- You can set up to 20 Index Marks.

E9490UD_EN.qx3 04.8.3 11:55 AM Page 76

76 Special Effects Playback (Videotape)

- Before you begin, press VCR so the VCR light appears on the front of the Recorder.



Forward and Reverse Searching (SP/LP/SLP)

1 **During tape playback, press and release NEXT/FF ▶▶| or PREV/REW |◀◀.** A fast forward or reverse picture search will begin.

2 **To return to playback, press PLAY ▶.**

Super High Speed Searching (LP/SLP)

1 **During tape playback, press NEXT/FF ▶▶| or PREV/REW |◀◀, then press again.** The search speed will increase. Repeatedly pressing NEXT/FF ▶▶| or PREV/REW |◀◀ will switch between regular and high speed searching.

2 **To return to normal playback, press PLAY ▶.**

Viewing a Still Picture

1 **During tape playback, press PAUSE ❚❚.** A still picture will appear on the screen.

2 **To advance the still picture one frame at a time, press PAUSE ❚❚ repeatedly.**

3 **To release the still picture and return to playback, press PLAY ▶.**

Viewing a Slow Motion Picture

1 **During tape playback, press SLOW.** The tape will play in slow motion.

2 **To return to normal playback, press PLAY ▶.**

Hi-Fi stereo

1 **When playing a videotape that was recorded in Hi-Fi audio, press AUDIO** to switch sound between Hi-Fi stereo or monaural (single-channel or MONO). If you have connected a stereo TV to the Recorder, select HIFI. If you have connected a monaural TV (with a single Audio In jack) to the Recorder, select MONO.

Helpful Hints

- *Slow and Still modes will switch to Stop mode after five minutes to protect the Recorder and the tape from damage.*
- *SP/LP/SLP means this feature will work with tapes recorded in Standard Play, Long Play, or Super Long Play. Tape speed details are on page 79.*

E9490UD_EN.qx3 04.8.3 11:55 AM Page 77

The following tape features are available in VCR mode. Press VCR so the VCR light appears on the front of the Recorder, if necessary.

Automatic Rewind, Eject

When a tape is played, fast forwarded, or recorded to its end, the tape will rewind to the beginning, stop, and eject itself.

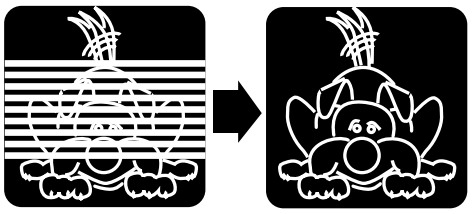
Automatic Tracking Adjustment

The VCR adjusts tracking automatically to give you the best possible picture quality. With some recordings, however, you may get a better picture using manual tracking.

Manual Tracking

To manually adjust the tracking during normal or slow motion playback of a videotape, press CHANNEL **+/-** on the remote.
Tracking will return to Automatic Tracking when you press STOP ■ or insert a tape.
You can also press CHANNEL **+/-** to remove vertical jitter in a Still picture.

Before Tracking Adjustment



After Tracking Adjustment

E9490UD_EN.qx3 04.8.3 11:55 AM Page 78

78 Glossary

AC-3: Audio Coding 3, also known as Dolby Digital; a multi-channel digital audio compression system from Dolby Labs.

Analog: Sound that has not been turned into numbers. Analog sound varies, while digital sound has specific numerical values. Analog sound is available when you use the red and white audio jacks on your equipment. These jacks send audio through two channels, the left and right.

AUDIO Jacks: Red and white jacks that send audio to other equipment (TV, Stereo, etc.) (OUT) or receive sound from other equipment (IN).

COAXIAL DIGITAL AUDIO OUT jack: Sends digital audio to a Stereo, letting you adjust the volume at the Stereo. The Stereo must have a Coaxial In jack. This connection provides the 5.1 channel surround sound as heard in movie theaters.

Color system: There are various systems for transmitting television signals or a DVD picture, for example PAL, SECAM, and NTSC. NTSC is the most common color system in the United States of America. The Recorder automatically selects the correct color system of DVDs.

COMPONENT VIDEO Jacks: The OUT jacks send high-quality video to a TV that has Component Video In jacks. The IN jacks allow the Recorder to receive high-quality video from other equipment, such as a DVD Player. The OUT jacks are also compatible with Progressive Scan (if your TV has Progressive Scan). The IN jacks cannot receive Progressive Scan video.

Digital: Sound that has been converted into numerical values. Digital sound is available when you use the COAXIAL DIGITAL AUDIO OUT jack on the Recorder. Sound is distributed through multiple channels.

Dolby Digital: A surround sound system that provides 5.1 channel sound as used in movie theaters.

DVD+R: DVD+Recordable. These Discs can be recorded and finalized only once.

DVD+RW: DVD+ReWritable. These Discs can be recorded on repeatedly.

Index Picture Screen: A screen that gives an overview of a DVD+RW or DVD+R. An Index Picture represents each recording.

Letterbox: Widescreen format; a TV aspect ratio setting (4:3). Displays the video in full-width, with black bars at the top and bottom of the TV screen. This format is similar to seeing a movie in a theater. If the Disc does not include a letterbox format, selecting 4:3 letterbox may have no effect. (For example, some DVDs are two-sided, with one side playing in widescreen format and the other side playing in a normal format.)

E9490UD_EN.qx3 04.8.3 11:55 AM Page 79

MPEG: Motion Picture Experts Group. A collection of compression systems for digital audio and video.

OTR: One-Touch Recording. Start a timed recording by pushing just one button; select the switch-off time in intervals of 30 minutes.

Pan & Scan: A TV aspect ratio setting (4:3). Displays the video with full-height picture, with one or both sides of the picture trimmed to fit on your TV screen. Some movie companies refer to this as "reformatting the picture to fit your TV screen."

PBC: Playback Control. A special feature on a Video CD or Super VCD that enables interactive use.

PBS: Public Broadcast System. The PBS channel transmits data for Automatic clock setting.

PCM: Pulse Code Modulation. A digital audio encoding system.

RGB: Red-Green-Blue. A top-quality video connection where red, green and blue components of a video signal are carried through separate wires. This also is referred to as the component video connection.

S-Video: Produces a clearer picture by sending separate signals for the luminance and the color.

Tape Speeds: how fast the video cassette travels during a recording or playback. The faster the tape speed, the better the picture quality. Slower tape speeds affect picture quality, but you can record more onto a videotape.

- **SP** (standard play) – fastest tape speed (recording time for a T120 tape is approximately two hours); best picture quality.
- **LP** (long play) – average tape speed. You cannot record in LP with this VCR. If tapes were recorded on a different VCR in LP speed, the tape will play in LP on the Recorder.
- **SLP** (super long play) – slowest tape speed (recording time for a T120 tape is approximately six hours). This speed allows the maximum recording on a single videotape.

VCD: Video Compact Disc. Similar to DVDs, but hold a smaller amount of recording.

VCR Plus+ System: Allows you to set a timer recording by entering a PlusCode number found in participating TV listings.

VIDEO Jacks: Yellow jacks that send picture to your TV (OUT) or receive video from other equipment (IN) (Camcorder, VCR, DVD Player, etc.).

Widescreen: A TV aspect ratio setting (16:9). Displays the video appropriately when you connect the Recorder to a widescreen TV.

E9490UD_EN.qx3 04.8.3 11:55 AM Page 80

80 Helpful Hints

If you are having problems with your product, check this list of problems and possible solutions before requesting service. You may be able to solve the problem yourself.

No power
- Press STANDBY-ON ⏻ on the front of the Recorder to turn on the Recorder.
- Make sure the AC outlet has power by trying another appliance in the same outlet.

No picture
- Make sure the TV power is on.
- Check the video cables. Make sure the cable(s) are fastened securely to the Recorder and the TV.
- Set your TV to the correct Video In channel. These channels are usually near channel zero (0). Or, you may have a button on the TV remote control that selects an Auxiliary or A/V IN channel. See your TV owner's manual for details. Or, go to your lowest TV channel and change channels down until you see the Recorder's background picture on the TV screen.
- You only need one video connection between the Recorder and the TV. *See page 9.*
- Unless you are using a Progressive Scan TV and connection, set Component video output to Interlaced. *See page 63.*

The picture is distorted; the picture is black and white during playback.
- TVs have a color system standard, usually NTSC in the United States. If the Disc's color system is different than your TV's color system, the picture may be distorted or colorless.
- The Recorder cannot record in color if the TV channel or source is not providing color. In some situations, programs that are broadcast in black and white cannot be recorded.
- Check the Disc for fingerprints. Clean the Disc with a soft cloth, wiping from the center to the edge in a straight line.
- Sometimes a small amount of picture distortion may appear. This is not a malfunction.
- If you set Record mode to a low-quality speed, change to a higher-quality speed after you finish recording. Leaving the Recorder set to a low-quality speed may affect the picture quality when playing DVDs later. *See page 52.*
- Connect the Recorder directly to the TV. *Details are on pages 9-16.*

The sound is distorted during Disc playback through a Stereo.
- Do not connect any cables from the Recorder to the Stereo's "PHONO IN" jack.
- Do not connect the Recorder's COAXIAL DIGITAL AUDIO OUT jack to an analog jack (red or white) on the Stereo.

There is no picture or the picture is noisy or has streaks during video cassette playback.
- Put the Recorder in VCR mode. Press VCR or SOURCE so the VCR light appears on the front of the Recorder.
- If you used the supplied RF coaxial cable to connect the Recorder to the TV, make sure the TV is on channel 03. The Recorder's output channel is channel 3 when you receive it. To change it to channel 4, *see page 10.* Make sure channel 03 or 04 is properly adjusted at the TV.
  Or, if you connected the Recorder to the TV using audio and video cables, select the correct Video In channel at the TV. *Details are on pages 12-14.*
- Adjust the tracking. *Details are on page 77.*
- TVs placed too close to the Recorder can cause interference during tape playback. Move the Recorder away from the TV.

You cannot insert a video cassette.
- Insert the tape, window side up, with the record tab facing you.
- Make sure a tape isn't already in the VCR by pressing STOP ■ / EJECT ⏏ (VCR) on the front of the Recorder.
- Gently push on the center of the tape when putting it in the VCR. Never force the tape into the VCR.

E9490UD_EN.qx3 04.8.3 11:55 AM Page 81

You cannot remove the tape.

- Make sure the power plug is completely connected to a power outlet.
- Unplug the Recorder power cord for five minutes. Then, plug in the power cord again and press STANDBY-ON ⏻ on the Recorder. Press STOP ■ / EJECT ⏏ (VCR) on the Recorder three to five times. If the tape still does not eject, you may need to have an authorized servicer remove the tape.

Recorder ejects the tape when you press VCR REC ●.

- Make sure the tape has a record tab. *Details are on page 69.*

Satellite Receiver Hookups

- Watching one TV channel while recording another may not be possible if you have a Satellite Receiver. Set your TV to channel 03 or 04, then make your channel selections at the Satellite Receiver.
- With many Satellite Receiver hookups, if you use audio and video cables to connect your Recorder to your TV, you will have to put your Recorder in Line Input mode (EXT1, EXT2, or CAM1).

Line Input mode

- If you accidentally enter Line Input mode (EXT1, EXT2 or CAM1 will appear on your TV screen briefly), press CHANNEL +/- to select another channel.

Hi-Fi Stereo Sound

- During videotape playback, Hi-Fi audio may revert to normal audio when you adjust tracking.
- When connecting the Recorder to a TV with the red and white audio cables, you will only get stereo sound if you connect the Recorder's AUDIO OUT jacks to the AUDIO IN jacks on your TV, and if the TV is on its Audio/Video In channel. See your TV owner's manual for details.
- When you connect the Recorder's AUDIO OUT jacks to the AUDIO IN jacks on your TV, the stereo light on the TV might not glow. If the VCR status display indicates you are receiving stereo, you are. *Details are on page 68.*
- Only tapes recorded in Hi-Fi audio will play in Hi-Fi audio. Tapes recorded in normal audio will play in monaural (single-channel) audio.

Cleaning the Video Heads

- Your Recorder automatically cleans the video heads of the VCR each time you insert a tape. However, the heads may become dirty. If so, have an authorized servicer clean the video heads. Eventually, the heads may need to be replaced.

The playback picture is too dim, too bright, or fluctuates in brightness.

- Some programs may be broadcast with copyright protection technology in order to protect the rights of copyright owners. This technology is used on programs that are recorded on video cassettes or DVDs, as well as some programs broadcast by antenna/cable/satellite television channels. Programs broadcast with copyright protection may not record clearly. Likewise, if you play a tape that is a recording of a copyright protected program, the picture may not be clear. Tapes of copyright protected programs may have a picture that is dark or dim, or the brightness of the picture may fluctuate. Therefore, avoid recording or playing copies of copyright protected programs.
- This Recorder incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation and is intended for home and other limited viewing uses only, unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

82 Helpful Hints (cont'd)

No sound

- Check the audio connections. *See pages 9-16.* Remember, you only need one audio connection between the Recorder and a TV or Stereo.
  See page 9 to see what connection best suits your situation.
- Make sure cables are connected firmly to all equipment.
- Select another channel, sound source, or Auxiliary station at your Stereo or TV. See your Stereo or TV manual for details. Or, just continue selecting the different sound sources or modes on the Stereo or TV until you hear sound from the Recorder. *See pages 9-16.*
- Set Analog output or Digital output correctly, based on what equipment you connected to the Recorder. *See pages 64-65.*
- You cannot hear MP3 audio if you are using the COAXIAL DIGITAL AUDIO OUT jack for Disc sound from the Recorder.
- Change the Audio setting of a DVD in the DVD Disc Menu.

A Disc recorded on this Recorder will not play on a DVD Player.

- In some cases, you can adapt the Disc at the Recorder, then try it again in the Player. This procedure does not solve the playability problem with all brands of Players. Furthermore, it may make the Disc incompatible with Players with which the Disc was previously compatible.
  To modify a Disc, place the Disc in the Recorder's disc tray. Do not close the tray. Then, press and hold the Number 2 button on the remote control until the tray closes. The Disc is now modified. Try it on the other Player.
  If the Disc still will not play on the Player, repeat this procedure, but press and hold the Number 3 button instead until the Recorder's tray closes.
  To return the Disc to its original version, repeat this process using the Number 1 button.
- To adapt a Disc that was recorded on a different Recorder, stop Disc play. Make sure the Disc Menu or INFO is not on the screen. Press RECORD ●. The following message will appear: "Disc has different menu. If you record on this disc the menu will be replaced. Press OK to open tray or press REC to replace menu." Press RECORD ●. The "replacing menu" message will appear. When that is finished, the Disc Information Screen will appear. Some information may be missing, for example the recording mode.
- To play a DVD+R on another DVD Player, finalize the Disc first. *See pages 53 and 55.*
- Editing changes may not be accessible when you play the Disc on other DVD Players. *See page 53.*

An Audio CD will not play on the Recorder.

- Some Audio CDs available on the market are copy protected. This Recorder may not play such copy-protected discs.

The Recorder will not select some features, such as Angles, Subtitles, or multi-language Audio.

- The feature may not be available on the Disc. If it is not, an "X" will appear on the TV screen. Check the Disc case to see if the Disc has the feature. If the Disc does not have the feature, the Recorder cannot create the feature. This is not a malfunction of the Recorder.

Disc will not play.

- Make sure the Disc label is facing up. If you are playing a two-sided Disc, make sure the label of the side you want to play is facing up. *See page 21.*
- Check the Access Control settings for the Disc. *See pages 57-61.*
- Check the Region Code of the DVD. The DVD must be coded for All regions or Region 1 in order to play on this Recorder. *See page 7.*
- See if the Disc is defective by trying another Disc. Make sure the Disc is not scratched or warped. Carefully clean the Disc. *See page 85.*

The Recorder does not respond to the remote control.

- Aim the remote directly at the IR sensor on the front of the Recorder (not toward your TV). *See page 26.*
- Remove any obstacles between the Recorder and the remote control.
- Inspect or replace the batteries in the remote control. *See page 8.*
- Make sure you selected DVD or VCR mode using the remote control.
- Make sure you selected DVD Recorder as the Remote control used. *See page 67.*
- In DVD mode, the symbol will appear briefly on the DVD display panel each time the Recorder receives a signal from the remote. If appears, the remote signal is reaching the Recorder correctly.

E9490UD_EN.qx3 04.8.3 11:55 AM Page 83

Recordings are not occurring as scheduled. New recordings cannot be made.

- See if the Disc has the maximum number of titles. Delete some recordings (DVD+RW only). *See page 50.*
- You can record only if the Disc is Unprotected. You cannot use a write-protected or finalized Disc. *See pages 53-55.*
- You cannot duplicate copyrighted DVDs, videotapes, or TV broadcasts using the Recorder. "COPY PROTECT" may appear on the display panel if you try to dub or record copyrighted material onto a DVD+R or DVD+RW using the Recorder.
- The signal from your Antenna/Cable TV system must be strong enough to provide good channel reception. If the signal is weak, if there is no signal, or if a channel has gone off the air, a recording will not occur.
- Check the Disc. If the Disc is bad (scratched, warped, etc.) or if the Recorder cannot read the Disc, you cannot record. "NO DISC" may appear on the display.
- A timer recording may not occur if the power fails during the time the recording was supposed to occur.
- If you adjust the clock after you set a timer recording, reset the timer recording.

The VCR will not record a TV program.

- Put the Recorder in VCR mode. Press VCR or SOURCE so the VCR light appears on the front of the Recorder.
- Check the connections between the Recorder, TV, antenna/Cable TV signal, and Cable Box/Satellite Receiver (if applicable). *Details are on pages 9-17.* For VCR features, you must connect the Recorder to a TV with the RF coaxial cable or the yellow video cable as described *on pages 10 and 14*.
- Make sure the video cassette has a record tab. *Details are on page 69.*

Another DVD Player shows the Index Picture Screen but does not react to PLAY ►.

- Press STOP ■ to exit the Index Picture Screen, then press PLAY ►.

You need to access system information for service reasons.

- Press SYSTEM MENU. Press ◄ to select . Press ▼ repeatedly to select in the second menu screen, then press ►. Press ▼ until the system information appears.

The Recorder does not work.

- The Recorder will not operate until you complete the Initial Setup. *See pages 18-19.*
- Disconnect the power cord from the power outlet for a few minutes. Reconnect the power cord and try to operate the Recorder again as usual.

Messages or strange codes appear on the Recorder's display.

- Remove and reinsert the Disc.
- Clean the Disc.
- Disconnect the power cord from the power outlet, then reconnect the cord and try play as usual.
- During Initial Setup, "IS TV ON? CO3" will appear on the Recorder's display panel. This appears in addition to the Initial Setup information that shows on your TV screen. *(Initial Setup information is on pages 18-19.)* "IS TV ON? CO3" indicates you should turn on your TV and set it to the correct Video In channel or channel 3. *See pages 9-16 to determine the correct Video In channel for your connection.* Or, see your TV manual for details.
- There are error messages that apply to recording problems. *See page 48.*

All of the Recorder's system menu is not visible.

- Certain TVs may not show the entire system menu on the TV screen. If the upper or top portion of the Recorder's system menu does not appear properly, this is a TV-related issue. It is not an improper functioning of the Recorder.

E9490UD_EN.qx3 04.8.3 11:55 AM Page 84

84 Care and Maintenance

Cleaning the Recorder

- Wipe the front panel and other exterior surfaces of the Recorder with a soft, slightly damp cloth.
- Never use a solvent, thinner, benzene, or alcohol to clean the Recorder. Do not spray insecticide liquid near the Recorder. Such chemicals may discolor the surface or damage the Recorder.

Cleaning Discs

- When a Disc becomes dirty, clean it with a cleaning cloth. Wipe the Disc from the center to the edge in a straight line. Do not wipe the Disc in a circular motion.

- Do not use solvents such as benzine, thinner, commercially available cleaners, or anti-static spray intended for analog discs.
- Always keep the tray closed to avoid dust on the lens.

Checking the Laser or Lens

- If the Recorder does not operate as described in this manual, the Recorder's laser may be dirty. Consult an Authorized Service Center for inspection and cleaning of the laser.
- The lens may cloud over if you suddenly move the Recorder from cold to warm surroundings. Playing a Disc is not possible then. Leave the power on for about one hour with no Disc in the Recorder until normal playback is possible.

Caring for Video Cassettes

- Use only cassettes with the VHS mark.
- Remove any light adhesive stick-on notes from the video cassette before putting the cassette in the VCR. Removable labels can jam the VCR.

Caring for the VCR's Video Heads

- Periodic maintenance is required to maintain your Recorder's excellent performance. The VCR has an Automatic Head Cleaner. However, the video heads will require replacement eventually. Only an authorized service center should perform this service.

E9490UD_EN.qx3 04.8.3 11:55 AM Page 85

VCR Video Heads	Four heads - HiFi
Antenna	VHF/UHF - 75 ohm external antenna terminal
VHF Output Signal	Channel 03 or 04 75 ohms unbalanced
DVD Color System	NTSC
Wow and Flutter	Below the measurement limitation (±0.001% W PEAK) (JEITIA)

DISC FORMATS SUPPORTED

Disc type	Playback	Recording
DVD+RW	•	•
DVD+R	•	•
DVD-RW (Video format)	•	—
DVD-R	•	—
DVD-Video	•	—
SVCD	•	—
Video CD	•	—
Audio CD	•	—
CD-R	•	—
CD-RW	•	—

DVD+REWRITABLE DISC FORMAT

Medium	Phase-Change ReWritable
Diameter	12 cm
Capacity (single side)	4.7 Gbyte
Recording time	M1 1 hour M2 2 hours M2x 2.5 hours M3 3 hours M4 4 hours M6 6 hours

TV STANDARD	**PAL/SECAM**	**NTSC**
Scan Frequency	50Hz	60Hz
Number of lines	625	525
Playback	•	•
Recording	•	•
Internal tuner	—	VHF 2-13 UHF 14-69 CATV 1-125

VIDEO FORMAT

Digital Compression	MPEG2 for DVD MPEG1 for VCD

VIDEO RESOLUTION	**50Hz**	**60Hz**
DVD-Video/ DVD+RW(HQ/SP)		
• Horiz.Resolution	720 pixels[1]	720 pixels[1]
• Vertical Resolution	576 lines	480 lines
DVD+RW (LP/EP)		
• Horiz.Resolution	360 pixels[2]	360 pixels[2]
• Vertical Resolution	576 lines	480 lines
VCD		
• Horiz.Resolution	352 pixels	352 pixels
• Vertical Resolution	288 lines	240 lines

[1] equivalent to 500 lines on your TV
[2] equivalent to 250 lines on your TV

VIDEO PERFORMANCE

DA Converter	10-bit
AD Converter	9-bit
Signal handling	Components
Video Out	1 Vpp into 75 Ohm
S-Video Out	Y: 1 Vpp into 75 Ohm C: 0.300 Vpp into 75 Ohm
Component Video/ Progressive Scan Out	Y: 1 Vpp into 75 Ohm PB: 0.7 Vpp into 75 Ohm PR: 0.7 Vpp into 75 Ohm

Power Requirement	120V AC +/- 10%, 60 Hz +/- 0.5%
Power Consumption	Power on: 43 W Power off: 9.0 W
Operating Temperature	41°F (5°C) to 104°F (40°C)
Relative Humidity	30% to 80%
Dimensions	17.1" (W) x 3.9" (H) x 10.3" (D) (435mm x 100mm x 262mm)
Weight	11.0 lbs. (5.0 kg)

AUDIO FORMAT

Compressed digital	Play	Recording
• Dolby Digital (AC-3)	Multi-channel	2-channel 16 bit, fs 48 kHz
• MPEG1	2-channel	—
• MPEG2	Multi-channel	—
Uncompressed digital (SPDIF - Sony Philips Digital Interface)		
• PCM (Pulse Code Modulation)	2-channel 16, 20, 24 bit fs 48, 96 kHz	—

AUDIO PERFORMANCE

DA Converter	24 bit	
AD Converter	16 bit	
DVD	fs 96 kHz	4 Hz -44 kHz
	fs 48 kHz	4 Hz -22 kHz
Video CD	fs 44.1 kHz	4 Hz -20 kHz
Audio CD	fs 44.1 kHz	4 Hz -20 kHz
Signal-Noise (1kHz)	105 dB	
Dynamic Range (1kHz)	100 dB	
Crosstalk (1kHz)	110 dB	
Distortion/Noise (1kHz)	90 dB	

FRONT CONNECTIONS

S-Video In	DIAMOND 4-pin
Video In	Cinch (yellow)
Audio Left/Right In	Cinch (white/red)

REAR CONNECTIONS

Component Video In	Cinch (green/blue/red)
Component Video Out	Cinch (green/blue/red)
S-Video In	MSC 4-pin
S-Video Out	MSC 4-pin
Video In	Cinch (yellow)
Video Out	Cinch (yellow)
Audio L/R In (2x)	Cinch (white/red)
Audio L/R Out (2x)	Cinch (white/red)
Digital Audio Out	1 coaxial IEC958 for CDDA /LPCM IEC1937 for MPEG2, Dolby Digital
(RF) Antenna In	Coaxial 75 ohms
(RF) Antenna Out	Coaxial 75 ohms
Power	Standard (IEC type)

NOTE: Designs and specifications are subject to change without notice.

E9490UD_EN.qx3 04.8.3 11:55 AM Page 86

MAGNAVOX LIMITED WARRANTY

One (1) Year Labor and Parts Repair (Facility)

MAGNAVOX warrants this product against defect in material or workmanship, subject to any conditions set forth as follows:

PROOF OF PURCHASE:
You must have proof of the date of purchase to receive warranted repair on the product. A sales receipt or other document showing the product and the date that you purchased the product as well as the authorized retailer included, is considered such proof.

COVERAGE:
(If this product is determined to be defective)

LABOR: For a period of one (1) year from the date of purchase, Magnavox will repair or replace the product, at its option, at no charge, or pay the labor charges to the Magnavox authorized repair facility (see warranty service phone numbers in next column). After the period of one (1) year, Magnavox will no longer be responsible for charges incurred.

PARTS: For a period of one (1) year from the date of purchase, Magnavox will supply, at no charge, new or rebuilt replacement parts in exchange for defective parts. Magnavox authorized service facility will provide removal and installation of the parts for one (1) year.

EXCLUDED FROM WARRANTY COVERAGE
Your warranty does not cover:

- Labor charges for installation or setup of the product, adjustment of customer controls on the product, and installation or repair of antenna systems outside of the product.
- Product repair and/or part replacement because of improper installation, connections to improper voltage supply, abuse, neglect, misuse, accident, unauthorized repair or other cause not within the control of Magnavox.
- A product that requires modification or adaptation to enable it to operate in any country other than the country for which it was designed, manufactured, approved and/or authorized, or repair of products damaged by these modifications.
- Damage occurring to product during shipping when improperly packaged or costs associated with packaging.
- Product lost in shipment and no signature verification of receipt can be obtained.
- A product used for commercial or institutional purposes (including but not limited to rental purposes).
- Products sold AS IS or RENEWED.

SHIP-IN WARRANTY:
For Ship-In warranty repair, ship the product to a Magnavox authorized repair facility for repair in its original carton and packing material. If you do not have the original carton or packing material, have your product professionally packed for shipping. Ship product via a traceable carrier. When it is necessary for you to ship the product to Magnavox for repair, you will pay the shipping cost for shipment to Magnavox. Magnavox will pay the shipping costs when returning the product to you.

TO OBTAIN WARRANTY SERVICE IN THE U.S.A., PUERTO RICO, OR U.S. VIRGIN ISLANDS...
Contact Magnavox Customer Care Center at:
1-800-705-2000

TO OBTAIN WARRANTY SERVICE IN CANADA...
1-800-661-6162 (French Speaking)
1-800-705-2000 (English or Spanish Speaking)

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This warranty gives you specific legal rights. You may have other rights which vary from state/province to state/province.

Magnavox, P.O. Box 671539, Marietta, GA 30006-0026

EL6580E002 / 07-04

E9490UD_EN.qx3 04.8.3 11:55 AM Page 87

E9490UD_EN.qx3 04.8.3 11:55 AM Page 88

ac power cord 10-16, 27
access control 57-61
add/delete channels 28
analog output 65
angle 32, 33, 38
antenna in/out jacks ...10-16, 27
append recording 51
arrow buttons 24
audio button 24, 37
audio in/out jacks 10-17, 26-27, 72
audio language 18, 32, 37, 66
auto chapters 52
auto resume 21, 56
automatic channel programming 28
automatic eject 77
automatic rewind 77

batteries 8
black level shift 63

cable box 11
cam1 jack 17, 22, 26
camcorder 17
camera angle 38
change code 57
change country 61
channel +/- buttons 23
channel ▲/▼ buttons 26
channel programming 28
chapter 32
chapter markers 51, 54
chapter/track selection 36
child lock 58
cleaning discs 84
clear button 24, 74
clear timer 47
clock setting 30-31
coaxial (digital audio out) jack 16, 27, 64
code (access control) 57
color systems 7
component video in/out jacks 12, 27, 63
component video output 63
connections 9-17
contents of package 6
contents, table of 5
controls, remote 23-24
copying videotapes 17, 72
counter 68
current chapter 54

daylight saving 30-31
d.dubbing button 26, 44, 73
delete all markers 54
delete chapter marker 54
digital audio 9, 16, 64
digital output 16, 64
disc bar 34
disc information screen 53
disc lock 58-60
disc menu button 24, 36
disc menus 36
disc name 53
disc pointer 34
disc tray 21, 26
display button 24, 68
display panels 25, 26
divide title 54
dolby surround 39, 65
dvd button 23
dvd rec ● button 22, 24, 43
dvd recorder features menu ...62

editing 53-54
erase disc 53
erase this title 50
erasing timer recordings 47
error messages 48
ext 1/2 jacks 27

fast motion 32
favorite scene selection 54
filter mode 52
finalize disc 53, 55
forward searching 40
frame-by-frame playback ..32, 39
front panel 26
fss button 24, 51, 54

glossary 78-79

helpful hints 80-83
hidden chapter 54
hi-fi stereo sound 76, 81
home videotape duplication ..17
hookups 9-17

index picture screen 34
index search 75
information boxes 35
initial setup 18-19
insert chapter marker 54
installation 28-31
"IS TV ON? C03" 18

language 18-19, 32, 37, 66
letterbox 63, 78
limited warranty 86
lock/unlock 58

M1 - M6 52
make edits compatible 53
menu bars 32
menu language 18, 66
menus 8
monitor button 22, 24, 43

name 50
new index picture 54
next/ff ▶▶| button .23, 36, 40, 75
night mode 67
ntsc 7
number buttons 23

ok button 24
on-screen symbols 33
one-touch recording 43
open/close/eject ⏏ button ...24

pal 7
panscan 63
parental level 60
pause ❚❚ button 23, 39, 69
pbc 56
pbs channel 30
pcm only 64
picture settings 63
play always 59
play ▶ button 20, 21, 23, 26
play full title 50
play mode button 24, 42
play once 59
playable discs 7
playback audio 66
playback control 56
playing a disc 21
pluscode 46, 48
power cord 10-16, 27
preserving memories 17
prev/rew |◀◀ button 23, 26, 36, 40, 75
progressive scan 12, 63
protection 53

quick disc playback 21
quick disc recording 22

rear panel 27
rec speed/mode button ..23, 73
record ● buttons 26
record mode 52
record one channel/ watch another 49, 70
record settings 52
recording audio 66
region codes 7
remote control 23-24
remote control used 67
remote sensor 26
repeat 33, 42
repeat a-b 33, 42
repeat playback 42
resume 21, 56
return button 23
reverse searching 40

safe 33, 59
safe record 43
safety precautions 3-4, 6
sap 66, 68
satellite receiver 11
scan 33, 41
search mode button 23
searching 40
select button 23, 45
slow motion 32-33, 40
sound mode 32, 39, 65
specifications 85
st (stereo) 39
standby 62
standby-on ⏻ button .21, 23, 26
status box 33, 62
stereo 65-66
stereo connections 15-16
still picture 39, 76
stop ■ / eject ⏏ button 26
subtitles 19, 32, 37, 66
sur (surround) 39, 65
svcd 7
s-video in/out jacks ...13, 17, 27
system menu button 24

T/C button 24
table of contents 5
tape
  duplication 72
  eject 20, 24
  speed 79
time/date 30-31
time search 32, 41, 75
time zone 30
timer information box 34-35
timer recording 45-47
title/disc menus 36
title settings menu 50
title/track 32
tracking 77
tracks 36
tuner information box 34-35
tv mute button 23
tv/video button 23, 49
tv shape 19, 63
tv standby button 23
tv volume +/- buttons 23

user preference settings 32

vcr button 23
vcr light 25
VCR Plus+channels 29
VCR Plus+/ TIMER button 24, 45-47
VCR Plus+ timer recording ..46
vcr status display 68
vcr rec ● button 69
video cd 7
video jacks 14, 17, 26-27
video in channel (tv) 9
video shift 63
visible chapter 54

warranty 86
widescreen tv 63

"x" 8, 33

zoom 32, 38

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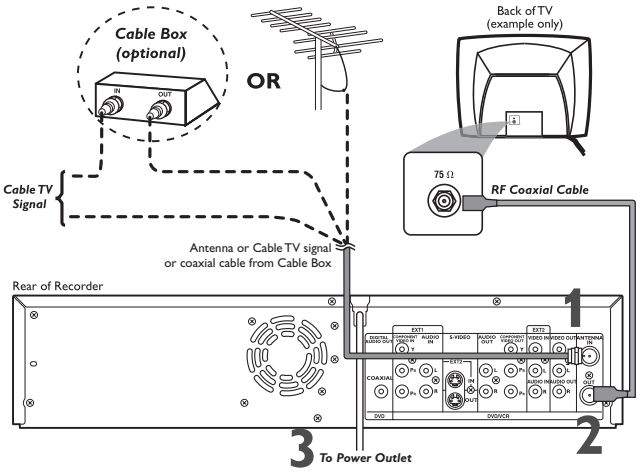
Quick-Use Guide

MRV700VR

MAGNAVOX

SMART. VERY SMART.

First connect ...



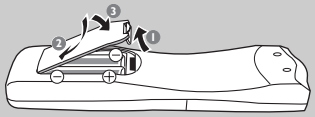
1 Remove the Antenna or Cable TV signal from your TV. Connect it to the **ANTENNA IN** jack at the rear of the Recorder.

2 Connect the supplied RF coaxial cable to the **(Antenna) OUT** jack on the Recorder and to your TV's **ANTENNA IN** or **RF INPUT** jack.

3 Connect the Recorder's **power cord** to a power outlet.

Helpful Hint:
If your TV has different connectors, refer to the TV manual for connection options. Also refer to the Recorder's owner's manual, which details other TV connection possibilities.

Prepare the remote control



Complete Initial Setup

Initial Setup screens will appear the first time you turn on the Recorder.

1 Press **STANDBY-ON** ⏻ to turn on the Recorder.

2 Turn on the TV and select **channel 3**.

NO PICTURE? Make sure the TV is on channel 3 if you used the simple connection shown in section 1 of this Quick-Use Guide. To use channel 4 or another Video channel at your TV, refer to the owner's manual for different connections.

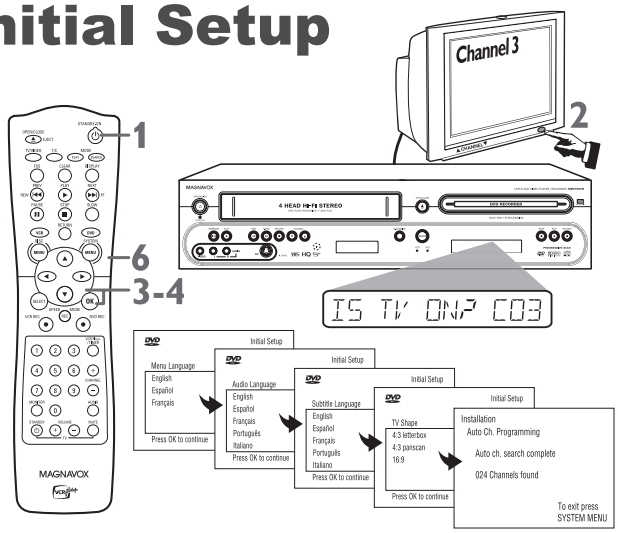
3 The Initial Setup menu will appear.
Use ▲ or ▼ to choose a setting for each item, then press **OK** to confirm.
The following menus will appear:

Menu Language
- **English, Español, Français** – Select a language for the Recorder's menus and on-screen displays.

Audio Language
- **English, Español, Français, etc** – Select a DVD audio language.

Subtitle Language
- **English, Español, Français, etc** – Select the language you prefer for DVD subtitles.

TV Shape
- **4:3 letterbox** Stretch the DVD picture with black bars on the top and bottom.
- **4:3 panscan** See a full-height picture with the sides trimmed.
- **16:9** Use with widescreen TVs. (frame ratio 16:9)



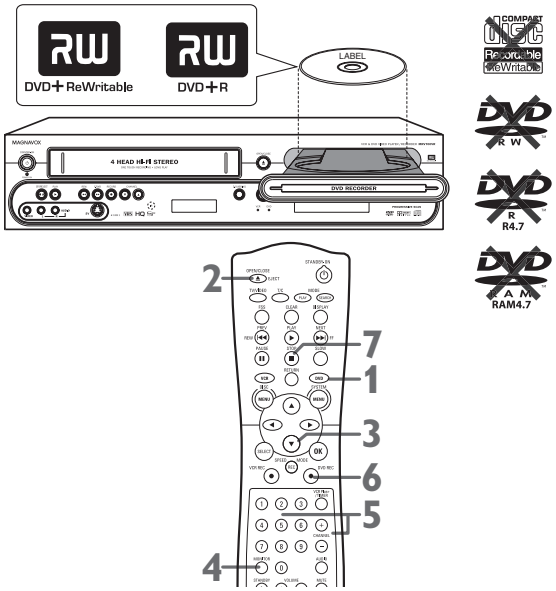
4 After you have connected the Antenna or Cable TV signal to the Recorder's ANTENNA IN jack, press **OK**.

5 **Searching for TV Channels** will appear.
Once the TV channel search is complete, the number of channels found will appear.

6 Press **SYSTEM MENU**. The Recorder will turn off, then on again.

The Recorder is ready for use!

Quick Disc Recording



1 Press **DVD** to put the Recorder in DVD mode.

2 Press **OPEN/CLOSE/EJECT ⏏** to open the disc tray. Insert a recordable DVD+RW/DVD+R with the label facing up, then press **OPEN/CLOSE/EJECT ⏏** to close the disc tray.

3 Press ▼ to select the last empty Title box on a DVD+RW.

4 Press **MONITOR** to see TV channels.

5 Press **CHANNEL +/−** or the **Number buttons** to select the channel you wish to record.

6 Press **DVD REC ●** to start recording.
- During recording, you may press **PAUSE** to pause the recording. Press **DVD REC ●** to continue.

7 To stop recording, press **STOP ■**.

To play a DVD+R on other DVD Players, you must finalize it first.

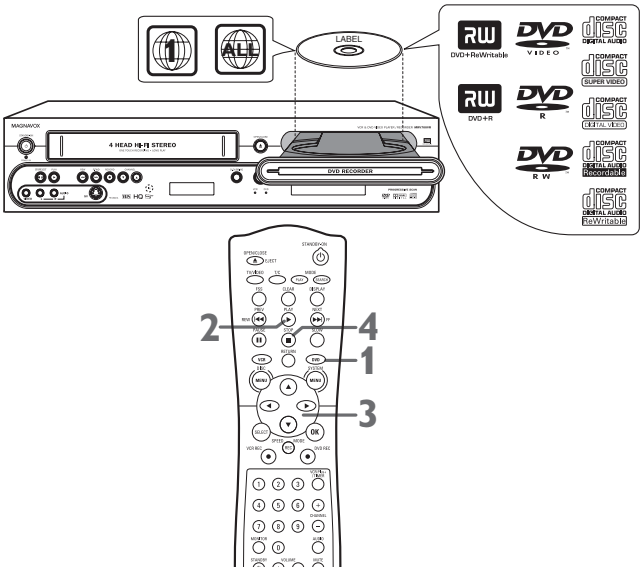
1 Press **SYSTEM MENU**. Press ◄ to select in the top left corner of the menu bar.

2 Press ▼ to select in the menu and press ►.

3 Press ▼ to select **Finalize disc**, then press **OK**.

Once a DVD+R is finalized, no recording or editing is possible. Unfinalizing a DVD+R is not possible.

Quick Disc Play



1 Press **DVD** to put the Recorder in DVD mode.

2 Insert a disc with the label facing up. Press **PLAY ►** to close the disc tray.

3 Play may start automatically.
If you are playing a DVD, a Disc menu may appear.
Press ◄ ►▲ ▼ to choose a setting. Then press OK to confirm.
If you are playing an Audio CD, press PLAY ► to start play.
If you are playing a DVD+RW/DVD+R, the Index Picture Screen will appear. Press ▲ or ▼ to select a Title, then press OK to start play.

4 To stop play, press **STOP ■**.

NO SOUND? Connect the AUDIO OUT L/R jacks at the back of the Recorder to the AUDIO IN jacks on a TV, stereo or receiver. Turn on the other equipment and select the appropriate channel or sound source.

Quick Videotape Play

(not illustrated)

1 Press **VCR** to put the Recorder in VCR mode.

2 Turn on the TV. Set it to Channel 3.

3 Insert a videotape in the cassette compartment and press **PLAY ►**.

4 To stop playback, press **STOP ■**.

Printed in China
8239 300 34961
IVMN20248/E9490U

Detailed playback features and additional functions are described in the accompanying owner's manual.